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TEXAS STATE JOURNAL OF MEDICINE

Volume 48 Number 10 Austin, Texas, October, 1952

CONTENTS

	Page
PRESIDENT'S PAGE	Preceding 671
EDITORIALS	
"Vote as You Please, but Please Vote"	671
"Lest We Forget"	672
Diabetes Detection Week	673
Library Dedication Attracts Many	673
ORIGINAL ARTICLES	
Stenotic Valvular Disease of the Heart; Surgical Treatment *Robert P. Glover*	674
A Technique of Cardiac Catheterization *Ray H. Skaggs and Don W. Chapman*	685
Artificial Femoral Head Replacement in Hip Joint Disorders *John J. Hinchey and Phillip L. Day*	689
A Brighter Outlook for the Juvenile Diabetic Patient *C. W. Daeschner*	694
Fluoridation of Public Water Supplies; A Commentary *J. M. Coleman*	698
Psychosomatic Medicine as It Affects the Family Doctor *W. Frank Cole*	703
CASE REPORTS	
Droop Shoulder Following Cervical Node Biopsy *Ralph A. Munslow and Joseph M. Capps*	706
Familial Polyposis of the Colon *J. Wade Harris and E. B. Hay*	709
NEWS	Page
Coming Meetings and Clinics	710
Oklahoma City Clinical Conference	712
Texas Division, American Cancer Society	713
Health Resources Advisory Committee Report	714
Court of Appeals Rules in Hoxsey Case	715
Southern Medical Association	715
LIBRARY SECTION	
Package Service	716
Motion Picture Film Library	716
Book Notices	717
ORGANIZATION SECTION	
American Medical Association	
Regional Legislative Conferences	721
Texas Medical Association	
Executive Council Meets	721
General Practitioner of Texas	721
J. M. Travis Appointed Secretary	722
Additional Committees Named	722
Library and Headquarters Building Formally Opened	722
County Medical Societies	725
AUXILIARY SECTION	
State Executive Board Meeting	727
Auxiliary to Southern Medical Association	728
Auxiliary News	728
DEATHS	728

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President's Page

COMBATING SOCIALISM

As H. R. 7800 was enacted into law in June, 1952, the first actual socialized medicine law became a reality. True enough, the law affects only a certain group of people and certain restrictions will prevent it from becoming active for one year. However, we should not for one minute suppose that it will die when that year has passed. It would be illogical and most naïve of us to believe that the proponents of this law, who were powerful enough to bring the bill up a second time within thirty days under suspension of the rules in a Congress anxious to adjourn, will not make provisions during the next session of Congress to see that it becomes fully active and possibly extend its coverage to still other groups.

With this law on the books we know what our enemies are going to do. But what are we going to do during the ensuing year? As free American citizens opposed to socialism in all forms and as a profession whose very life depends upon the private practice of medicine free from any socialistic restraint, we have a tremendous responsibility to see that this law never becomes active and that no other such law is passed. It is going to be up to us primarily.

In discharging our responsibility we must proceed along several lines. At the present time three courses are open, others will come later. First, we must become well informed about what is being done to this free nation and to our profession and how these things are done. Second, we must inform as many others as time and strength will permit. Third, we must band together in an organization so strong, so large, and so resolute that we can successfully resist socialization in whatever form it may assume. Our actions must be such that the American people will

be confident that as their doctors, we will not desert them but, under any and all circumstances of government, will minister unto them so long as we shall be allowed to live.

The Association of American Physicians and Surgeons is an organization of free American doctors that is making, through its freedom program, a vast effort to inform doctors, medical students, and the youth of our land concerning the constant efforts to destroy our government and enslave us. The A.A.P.S., through its annual essay contest, is having more good effect on the thinking of our youth than any other single group.

Every member of A.A.P.S. pledges that he will not cooperate with any scheme of federal or socialized medicine. When 75 per cent of American doctors have so pledged themselves, the A.A.P.S. will be strong enough to offer effective resistance to the socializers.

During August, 1952, every Texas doctor who was not already a member of the A.A.P.S. received three letters from the A.A.P.S. membership committee earnestly soliciting membership. The response was gratifying but not adequate.

It is the earnest and considered desire of your President that every Texas doctor become a member of the A.A.P.S. and that these memberships be maintained so long as there may be a need for the A.A.P.S. It is also the wish of your President that the chief project of the Texas Medical Association and its Auxiliary during 1952-1953 be the successful sponsorship of the A.A.P.S. essay contest in every county medical society in Texas. It is only through such a positive program of education and action that our nation and our freedom may be preserved for posterity.

T. C. Terrell

TEXAS STATE JOURNAL OF MEDICINE

DEVOTED TO THE INTERESTS OF THE MEDICAL PROFESSION AND PUBLIC HEALTH IN TEXAS

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"VOTE AS YOU PLEASE, BUT PLEASE VOTE"

The slogan heading these paragraphs is neither new nor original, but it states succinctly the plea which many individuals and groups, both "interested" and "disinterested" are making this month. November 4 is the day on which voters in the United States will elect a president and a vice-president to lead them for the coming four years and a host of other officials who will represent the citizenship in governmental posts for varying terms of office. Note that it is *voters* who will make this choice. Let us hope that this year the voters will be more than a small minority of the American people.

Four years ago the United States held its latest general election. At that time only 51 per cent of the eligible voters went to the polls. When it is considered that many persons are not eligible to vote, it is evident that a minority of the people actually named the officials who now hold high office. The United States—"cradle of liberty," "birthplace of democracy"—made a poor showing in comparison with voting in other nations. Perhaps the figures which follow may make us sit up and take notice; they indicate the percentage of eligible voters who voted in general elections:[1]

Belgium, March, 1950, 90 per cent.
Italy, April, 1948, 89 per cent.
England, October, 1951, 83 per cent.
Canada, June, 1949, 75 per cent.
Israel, July, 1951, 72 per cent.
Sweden, September, 1951, 80 per cent.
France, October, 1945, 75 per cent.
Japan, June, 1950, 71 per cent.
United States, November, 1948, 51 per cent.

Shame on us!

All of us realize that government has become a big business in recent years, but do we understand just how big? A recent editorial in the Boston *Herald* suggests an answer:[2]

"Total government spending—local, state and Federal—for the coming year will approximate the total wages and salaries of 75 per cent of the nongovernmental workers in the United States.

"The same expenditures will equal the total national income of Argentina, Belgium, Brazil, Denmark, France, Greece, Italy, the Netherlands, Norway,

[1] *Missouri Pacific Lines News Reel, Sept. 1, 1952.*
[2] *From an analysis prepared by the First National Bank of Boston and quoted in Brevits, issued by Vance, Sanders and Company, Boston, Sept. 22, 1952.*

Portugal, Sweden, Switzerland and the United Kingdom....

"The Federal government will spend more during the current fiscal year than it spent from 1789 through 1925.

"The number of civilian workers in the executive branch of the government has increased by 339 per cent in the past 20 years....

"In the year ending June 30, 1953, Federal government expenditures will take the estimated income of everyone west of the Mississippi, all of the people in the state of Mississippi and 55 per cent of those in Alabama. If total state and local expenditures are added, the area would include the rest of Alabama, all of the individual income of residents of Kentucky, Tennessee, Georgia, Florida, South Carolina and three-quarters of those in North Carolina.

"The total area has 47 per cent of the country's population, 83 per cent of the land area, 95 per cent of the total crude petroleum production, 85 per cent of the lumber output, 70 per cent of the total value of mineral production and 71 per cent of all farm crops."

Still further light on the size of government and its activities is given by the Boston *Evening American:*[2]

"Back in 1933... about two million persons—only one and a third per cent of our population—received money, directly or indirectly, from the Federal Treasury.

"By 1940 the number had multiplied nine times.

"Today the total is fifteen times what it was in 1933—more than thirty million persons, or 20 per cent of our greatly increased population."

Our tax money is flowing into government coffers whether we like it or not. Spending by the government goes on at a terrific rate whether we like it or not. Surely we want to have some voice in selecting those who will decide how much taxes—what kind of spending.

Taking fifteen minutes out of a busy day to cast a ballot may seem like foolishness and a waste of time. But single votes by citizens who attempt to study issues and candidates objectively and intelligently do make a difference. The strength of our country lies in these individual voters, and together they direct the course which our nation shall take.

On November 4, "Vote as You Please, But Please Vote." Furthermore, urge your friends and neighbors to do the same.

"LEST WE FORGET"

Probably every physician has had a patient complain, "Right after I had my accident, all my friends came to see me, but now that I've been in the hospital a month nobody pays me any attention."

Interest generated by the unexpected, fear, or even a blare of publicity is likely to result in an immediate shower of attention which dissipates itself as other affairs become paramount. This is true in regard to the patient suddenly taken ill and then confined to bed for months of convalescence. It is true also of a worthwhile community project which is full of immediate appeal and then is forgotten as it moves from the new, publicity-fraught stage into the steady, unglamorous plodding necessary to achieve a long-range goal. It is true in regard to the program of blood collection to care for military, civilian, and emergency needs.

There have been times in recent years when striking developments on the fighting front or catastrophic emergencies at home have lent special appeal to the giving of blood. Human nature being what it is, however, the continuing necessity to keep a steady flow of blood going into local collection centers for use in routine medical practice, for shipment to military forces, or for processing and storage for either military or peacetime emergency loses its appeal, and once-enthusiastic donors apply their energies in other, newer directions and forget to return to the blood collection centers.

An important service which physicians can perform is to keep ever before their patients and friends the fact that blood cannot be manufactured—it must be given by human beings—and that blood and its derivatives are proving more and more to be lifesaving agents. The need for adequate supplies of blood is as great today as ever. Since whole blood cannot be kept indefinitely, a single surge of giving cannot solve the problem. Donations must be continued on a regular basis, with those who are

able coming back again and again to replenish the supply of life-giving fluid and those who cannot themselves give, encouraging others to do so and perhaps offering their services for clerical or other work required in the collection procedure.

No one is more aware than doctors of what a difference blood can mean to the welfare of a sick person. No one is in as strategic a position as doctors to help keep the supply of blood flowing freely.

DIABETES DETECTION WEEK

Diabetes Detection Week, to be held this year from November 16 to 22, will be the fifth annual drive of its kind.

This drive is an effective tool for good medical public relations. Unlike many other campaigns, its purpose is not to raise funds. The work that doctors do to test the urine of patients free of charge will be a positive point in their favor, and by obtaining the cooperation of local laymen, schools, churches, and industry to put over the drive, they can prove their thesis that health care organized on the community level can and does work.

In addition to the already known one million diabetic patients under treatment, it is believed that another million in the nation have the disease yet undetected and that perhaps as many as two million additional persons may be potential diabetic patients. Diabetes is of concern not only to the general practitioner and internist, upon whom rests the responsibility for the management of most cases, but other specialists as well.

The physician, recognizing that a basic part of medicine is preventive in nature, will take as his task not merely to supervise the treatment of those in whom the disease already has been diagnosed, but also to discover the "hidden" diabetic patient.

In 1951 the drive had the endorsement of many county medical societies; in Texas alone more than 25 county societies took part. Material on organizing a drive for this year is obtainable from the American Diabetes Association, 11 West Forty-Second Street, New York 36.

LIBRARY DEDICATION ATTRACTS MANY

Long to be remembered are the dedicatory services for the Texas Medical Association Memorial Library, which took place in Austin September 19-21. Almost two thousand persons toured and viewed the building during the three days. Many attended the programs at which tributes to medical progress and to the past presidents of the Association were delivered and the building was dedicated to the purpose of "better health for all Texans."

Members of the Executive Council of the Association and Executive Board of the Woman's Auxiliary, which met in the headquarters city during the week-end, their families and guests, Austin civic leaders, and representatives from schools, libraries, and groups closely associated with the medical profession were present Friday for the special afternoon and evening programs to hear Governor Allan Shivers, Senator Lyndon Johnson, and Dr. Louis H. Bauer, president of the American Medical Association. Open house for the public all day Sunday attracted many laymen from Austin and vicinity who toured the magnificent structure, admired its furnishings, and expressed interest in the medical library and its services for their family doctors. Friends of the profession and of Association officers sent many floral arrangements to add to the beauty of the building.

Excerpts from the program and pictures taken during the formal dedication exercises will be found in the Organization Section of this issue of the JOURNAL (pp. 722-725).

All in all, the dedication was a success and thanks are due to everyone who made it so. For all Texas physicians who have not been able to visit the building, the latch string is still out and will be at any time the doctors of Texas are in Austin and can come by to visit.

ORIGINAL ARTICLES

STENOTIC VALVULAR DISEASE OF THE HEART
Surgical Treatment

ROBERT P. GLOVER,* M.D., Philadelphia, Pennsylvania

THE past half decade has witnessed a dramatic and hitherto unforeseen renaissance in the treatment of cardiac disease. The demonstration, in 1948, that the interior of the heart could be successfully invaded at will for the reconstruction of pathologic disorders marked a new era of surgical achievement.[1, 2] Surgery, almost from its inception, has had as one of its primary objectives the relief of "obstruction and stricture" no matter where the offending block lay within the systems of the human body. It was logical, therefore, that with the application of basic surgical principles to this new intracardiac field initial attention and effort should be directed toward the relief of stenotic ("obstruction and stricture") valvular disease.

Any consideration of valvular lesions, surgical or otherwise, must at once take into account the nature of their pathologic change. For reasons not entirely clear the valves within the heart predominantly undergo malformation according to their location within the vascular pump. Those on the right side (tricuspid and pulmonary) are primarily the seat of congenital deformities whereas those on the left (mitral and aortic) result from superimposed, acquired disease usually rheumatic in origin.

The first of these two groups to receive concentrated attention was the congenital anomaly. Because of the inherent dread of all surgeons to violate directly the sanctity of an organ so vital as the heart or perhaps more accurately because the exact nature of the pathologic condition was so little understood, initial ameliorative procedures were extracardiac in scope. Obstructions were bypassed outside of the confines of the pericardium by the production of vascular shunts. This led to a delay in the true understanding of the individual anomalies both as to their pathologic anatomy and their physiologic effects, for close scrutiny of the defective areas in the living state was not possible by the surgical techniques devised.

Presented at the Texas Medical Association, Annual Session, Dallas, May 6, 1952.

**Clinical Professor of Surgery, Temple University Medical School (Episcopal Hospital) and Clinical Professor of Thoracic Surgery, Hahnemann Medical College and Hospital.*

TRICUSPID STENOSIS

A discussion of tricuspid and pulmonary obstructions can more practically be considered together. The tricuspid valve is seldom the site of serious pathologic lesions. When, on rare occasions, it is in a state of congenital atresia, there is usually an associated interauricular septal defect and a hypoplastic right ventricle (fig. 1). In such situations the pulmonary artery arises either from the left ventricle or more commonly from the rudimentary right ventricle, and pulmonary stenosis is present. The clinical effect of such distortion is the cyanotic child resulting from the intracardiac passage of unoxygenated venous blood directly into the systemic circulation via left atrium, ventricle, and aorta. Such a patient may clinically be indistinguishable from the common variety of "blue baby" (tetralogy of Fallot) except by angiocardiography or cardiac catheterization or both. In this instance, due to the multiplicity and nature of the deformity, the only acceptable form of surgical treatment at present is the production of a systemic-pulmonary shunt (described later) devised by Blalock[4] or Potts.[17] The results obtained, although not entirely

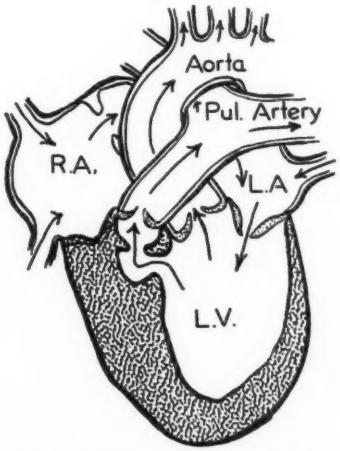


FIG. 1. Congenital tricuspid stenosis with patent interauricular septum, rudimentary right ventricle, and pulmonary stenosis (infundibular).

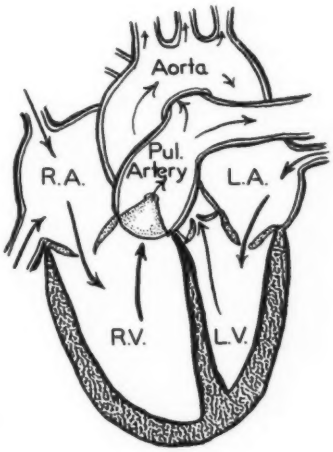
satisfactory, offer considerable palliation and relief of clinical signs and symptoms.

Tricuspid stenosis resulting from rheumatic disease has been described as a pathologic entity. Rarely has it been diagnosed with accuracy during life, and to date no report of its attempted surgical correction has appeared in the literature.

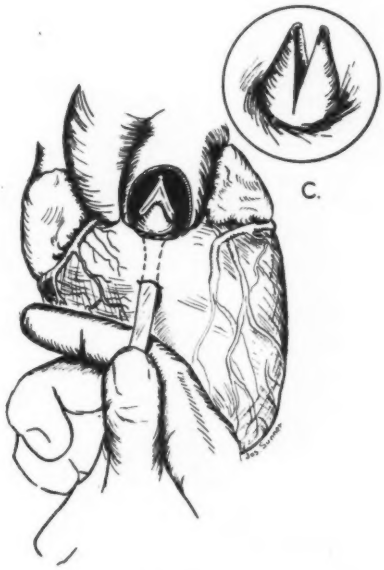
PULMONARY STENOSIS

For years the term pulmonary stenosis has erroneously been used almost as a synonym for the tetrad of anomalies known as the tetralogy of Fallot. It is true that one, and perhaps the most significant, of the components of the tetralogy is some form of pulmonary stenosis, but it must be clearly understood that stenosis of the pulmonary valve can and, not infrequently, is seen as a single defect. In such a case there exists a conelike fusion of the three pulmonary cusps with the apex of the tiny megaphone so formed protruding into the pulmonary artery. The normal volume of blood flow through the obstructed valve is obviously greatly reduced because of the tiny probe-sized lumen of the stenotic orifice. As the interventricular septum is intact, no other escape of right ventricular blood is available as it all must eventually pass through the diminutive pulmonary valve orifice into the lungs to be oxygenated. Consequently, such patients are not cyanotic but the resistance to the expulsion of the right ventricular outflow results in dyspnea upon exertion and eventual right-sided heart failure. Occasionally, in time, the increasing pressure of blood in the right side of the heart will force open an incompletely fused interauricular foramen ovale with escape of venous blood into the left heart, at which time some cyanosis may become apparent. Systemic artery–pulmonary artery shunts obviously are contraindicated in "pure" pulmonary stenosis, for they do not relieve or even compensate for the valvular obstruction and merely re-oxygenate blood already saturated with oxygen and add to the effect of the valvular obstruction by raising the pulmonary vascular pressures.

Direct intracardiac pulmonary valvulotomy, as originally suggested by Sellors[18] and popularized by Brock,[6, 7] is today the surgical treatment of choice. This method employs a small transventricular (right) incision through which a diamond-shaped knife is introduced into the fused pulmonary valve cone dividing it into two symmetrical leaflets (fig. 2). The bicuspid valve so produced can open and close in response to ventricular systole and diastole, thus adequately relieving the obstructed valve without the production of significant insufficiency. Well over 200 of these operations have been performed throughout this country and Europe, including some 20 cases on my own services. The mortality has been well be-



A.



B.

FIG. 2A. Pulmonary stenosis (valvular) with intact ventricular septum.

B. Transventricular (right) approach to pulmonary valve using flat triangular knife to divide the valve cone.
C. Bicuspid valve after division (lateral view).

low 10 per cent and the overall results highly satisfactory.

TETRALOGY OF FALLOT

Congenital pulmonary stenosis with a high interventricular septal defect, an overriding or dextroposed aorta with concomitant hypertrophy of the right ventricle produces the syndrome known as tetralogy of Fallot. Such a combination of defects produces a right-to-left shunt of blood within the heart causing an admixture of unoxygenated venous blood in the aorta with its attendant clinical cyanosis. Physiologically, the patient is suffering from a greatly diminished pulmonary blood flow, resulting in invalidism and early death. The brilliant results achieved by the Blalock-Taussig[4] operation (subclavian artery-pulmonary artery anastomosis) and its clever modification, the Potts-Gibson[17] operation (direct aorta–pulmonary artery anastomosis) have brightened the future for these little sufferers and have actually been the stimulus for the tremendous strides now being made in the field of cardiovascular surgery. In a review of the results observed in 1,000 patients operated on by Blalock and his associates, Taussig and

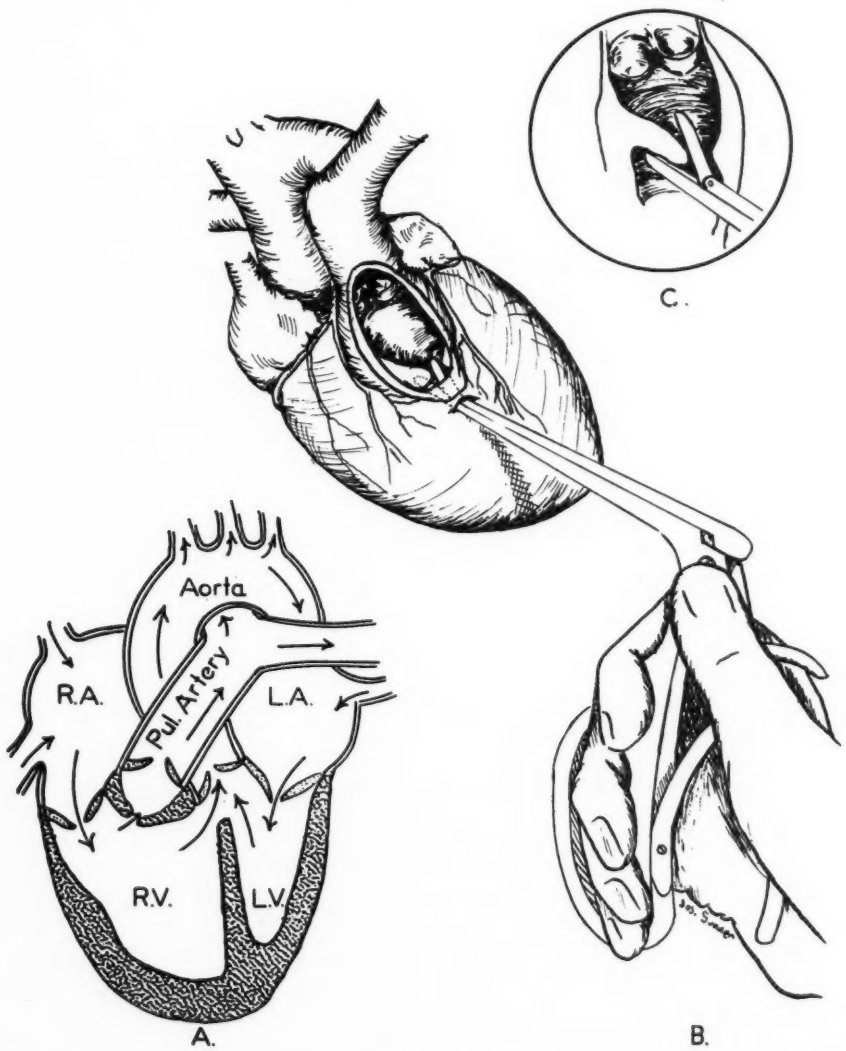


FIG. 3A. Diagram of the tetralogy of Fallot showing pulmonary stenosis (infundibular), high interventricular septal defect, overriding aorta (dextroposition), and hypertrophy of right ventricle.

B. Transventricular (right) approach for removal of a portion of the infundibular pulmonary obstruction.

C. Inset to show the type of resection performed.

colleagues[19] found that 78 per cent of the patients showed good results at the time of discharge from the hospital. It must be remembered, however, that this operation calls for the addition of another vascular defect—a surgically produced patent ductus arteriosus—superimposed upon the several serious malformations already present. The question, still unanswerable, remains as to what the eventual fate of such patients will be, harboring as they do such a nest of virulent anomalies, any one of which might be fatal as a single lesion.

With the development of direct intracardiac surgical techniques it has seemed altogether proper and reasonable to explore ways and means for reducing the number of defects in the tetralogy rather than adding to them. This obviously entailed an accurate and detailed knowledge of the pathologic defects themselves, particularly the pulmonary stenosis. Such a study has been carried out by Brock,[6, 7] who has shown that the pulmonary obstruction may be either valvular of the type already discussed or more commonly infundibular. The infundibulum of the right ventricle is that part of the pulmonary conus area lying immediately proximal to the pulmonary valve. It commonly is the seat of muscular or fibrous hypertrophy occurring just adjacent to the pulmonary valve (subvalvular) or at some distance from the valve in which case a small olive-sized or egg-sized chamber may separate the obstructing tissue from the root of the pulmonary artery. Occasionally the entire outflow tract of the right ventricle may be narrowed over a considerable distance, a finding which for the most part has defied direct surgical attack to date.

Brock and my associates and I have been the strongest advocates of a direct approach to this problem in the hope that a more normal circulation into the lungs could be provided. When the valve has been found to be the site of obstruction, the technique as described for "pure" pulmonary stenosis has been applied with eminent success. Infundibular obstruction poses a more difficult problem both as to the recognition of its exact location at the time of surgery and as to methods for relieving its obstructing effect. With considerable experience and a certain dispatch Brock, I[9] and others have had considerable success with the removal of portions of the obstructing tissue employing a variety of punch-like instruments specially designed for the purpose (fig. 3). It is sufficient to state here that in some 150 operations done to date in various centers the overall initial results have been equal to, or have even surpassed, the results obtained by shunt procedures. It would seem obligatory, therefore, that the profession be aware of these newer possibilities which, on theoretic grounds at least, hold greater promise for the continued and long term improvement of patients so afflicted.

MITRAL STENOSIS

At the present time by far the greatest field of intracardiac surgical endeavor is concerned with the problems of acquired rather than congenital disease, a mirror image of conditions as they existed just three years ago. White[20] has estimated that 0.5 to 1 per cent of the community at large is affected by valvular disease, particularly in those areas where rheumatic fever is endemic as in the northeastern part of the United States and northern Europe. Among the first two million American selectees between the ages of 21 and 36 in World War II, about one hundred thousand were found to be unfit because of cardiovascular disease and at least 50 per cent of these suffered from rheumatic valvular defects.[8] The mitral and aortic valves are the common sites of involvement, and structural stenosis is the most serious end result of rheumatic infection. It is little wonder, therefore, since stenosis is essentially a mechanical stricture, that surgical intervention should be considered as offering the ideal therapeutic approach provided it can be accomplished with relative safety and without the production of deleterious side effects.

In rheumatic disease the mitral valve develops numerous minute inflammatory verrucae in a row along the line of closure of the valve. With continuing rheumatic activity and attempts at healing over the course of years there is a gradual development of fibrosis, thickening, and narrowing of the valve leaflets as their cusp margins become adherent at the angles (commissures). This scarring may be limited in extent to resemble a purse-string puckering at the valve orifice with minimal involvement of the valve leaflets themselves, which remain quite pliable and of the consistency of kid glove skin. In other instances, the periorificial induration involves one-fourth to one-half of the valve cone leaving a correspondingly smaller margin of flexible tissue about the base at the A-V ring. In far advanced disease the whole valve may become rigid and completely inflexible—a hard, ovoid plaque surrounding a tiny fish-mouth slit. Calcium may be present at any stage as flecks, localized infiltration, or, rarely almost completely replacing valve tissue. Thus, as stenosis is produced, pronounced resistance to the passage of blood from the left atrium into the left ventricle ensues. Since the egress of blood from the left atrium is impaired, increased pressure within and considerable dilatation of this chamber results. The high intra-auricular pressure is transmitted to the entire pulmonary vascular system and thence to the right side of the heart. A chronic pulmonary hypertension results with nocturnal or exertional pulmonary congestion (dyspnea), rupture of pulmonary

capillaries (hemoptysis), and failure of the right side of the heart (hepatomegaly, ascites, and peripheral edema).

Once this progressive pattern becomes heralded by the onset of fatigue and exertional dyspnea the ultimate outcome for the patient is in time invariably unfavorable. At this point the treatment of the physician will be directed toward the support of a myocardium which is vainly attempting to maintain an adequate systemic circulation in the face of an unrelenting mechanical stricture. The fort can be held temporarily but eventually under such circumstances both the physician and the myocardium are fighting a losing battle. It is paramount to recognize that the earliest onset of symptoms bespeaks a failing myocardial and pulmonary vascular reserve as the result of *already long-standing structural valvular stenosis*. To repeat, with the onset of symptoms the valvular lesion for the most part has already reached its ultimate cicatrix and progression of the patient's disability is one of symptomatic breakdown and disintegration, not of increasing structural stenosis within the valve itself. The therapeutic conclusion is obvious. The stenotic valve must be opened at the earliest suggestion of the above described obstructive phenomena if one is to avoid the inevitable progression of enlarging cardiac chambers (left atrium, right ventricle, right atrium), pulmonary edema, recurrent hemoptysis, auricular fibrillation, embolic episodes, and chronic congestive (right heart) failure.

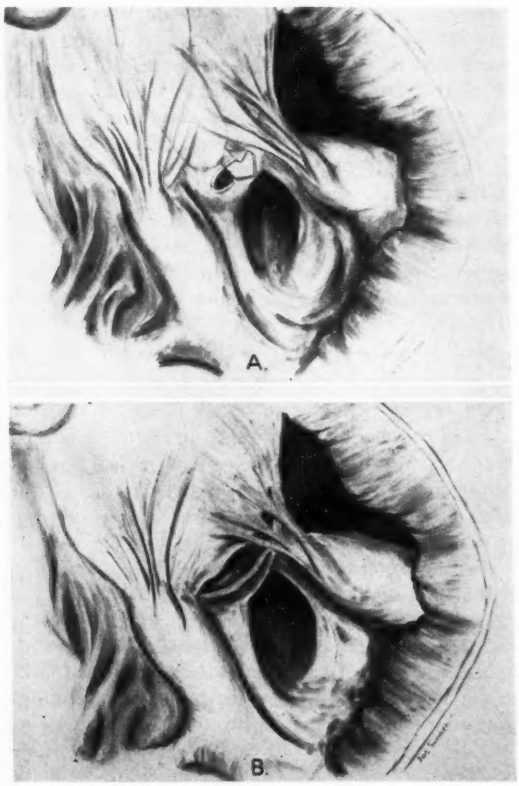


FIG. 4A. Left ventricular view of the mitral valve cone in stenosis. The right index finger and Glover-Avery guillotine have been inserted through the left auricular appendage and properly placed for incision of the anterolateral commissure.

B. Valve orifice after commissurotomy. Note the intact chordae tendineae insuring partial restoration of valve function with prevention of significant mitral insufficiency.

It is sufficient to state here that mitral commissurotomy is a procedure in which the individual anatomic leaflets of the stenotic valve are separated. By incising the angles or commissures of the mitral slit, its obstructing effect can be overcome and a considerable degree of valve function can be reestablished. It is to be noted that no valve tissue is removed, thus allowing the liberated though thickened and deformed valve leaflets to open during ventricular diastole and approximate during ventricular systole without the production of additional significant regurgitation [10-12, 14-16] (fig. 4).

Present Series

Two hundred fifty-six mitral commissurotomies were performed by my partner, Dr. Thomas J. E. O'Neill, and me from February 2, 1949 to April 30, 1952. Fifty-three of these have been done since January 1, 1952 and except for mortality data have not been statistically analyzed as yet. Similarly, 39 others of the series were performed for and with other thoracic surgeons on their own services throughout the country by invitation and will be reported by them. The operative mortality rate for the entire series of 256 was 5.4 per cent and the overall mortality, including late deaths was 7.8 per cent. These later deaths occurred almost exclusively in stage 5 cases (see table 1), more than six months after surgery, from a continuation of irreversible cardiovascular and pulmonary vascular disease unaffected by surgical intervention.

The remaining 164 consecutive cases with a six month to three and one-half year follow-up period were subjected to analysis. A lapse of at least six months is essential before results may be evaluated, for experience has shown that in most instances at least this period of time must pass before the patient can fully appreciate the full subjective benefits of surgery. Actually, a much longer period is often required before all objective evidences have become stabilized.

Of these 164 patients, 118 were females and 46 were males. The youngest was aged 4 years and the oldest aged 59 with an average age of 35. Most of these patients were far advanced in the course of their

disease and represented the late or terminal stages of mitral stenosis, a fact which it is to be hoped can be corrected in the future by reference of patients at the onset of their obstructive symptoms. They have been grouped according to our previously published classification as noted in table 1.

TABLE 1.—*Classification of 164 Cases of Mitral Stenosis According to Severity at Time of Operation and Summary of Mortality in These Cases.*

Stage of Stenosis	No. Cases	Deaths: Operative	Deaths: Late	Mortality (%): Operative	Mortality (%): Late
1. Asymptomatic	0	0	0	0	0
2. Statically incapacitating	14	0	0	0	0
3. Progressively incapacitating	105	5	1	4.7	.9
4. Terminally incapacitating	32	3	0	9.3	0
5. Irreversible	13	2	8	15.3	61.5
Total	164	10	9	6.1	5.5
Overall mortality				11.6%	

This classification has been prepared in an effort to combine a functional and therapeutic yardstick for evaluation of the patients for surgery. *Stage 1* includes patients with the auscultatory findings of mitral stenosis but who as yet have no symptoms. Patients in *stage 2* have progressed to the point where symptoms under physical activity have developed, but the patient, living within his own limitations, remains on an even plateau. *Stage 3,* the largest group and one encompassing many variables, includes those who, despite the best medical therapy, are losing ground. *Stage 4,* terminally incapacitating, includes those patients in whom there is constant evidence of congestive failure even with limited physical activity. Most of these can be rendered relatively free of their accumulating tissue fluid only by the strictest of medical regimens. A certain small percentage of those in this group will ultimately prove after surgery to have been in *stage 5* and to have had irreversible changes. As yet, it has been impossible routinely to separate patients in these two stages by clinical and physiologic methods; hence, we reserve stage five to classify those whose condition, despite a technically adequate commissurotomy, remains relatively unchanged.

TABLE 2.—*Status of 164 Cases of Mitral Stenosis Prior to Admission of Patient for Surgery.*

Symptoms	No. Cases
Progressive dyspnea and fatigue	164
Congestive heart failure	110
Hemoptysis	59
Arterial embolism	21

Status Prior to Admission (table 2).—Progressive dyspnea and fatigue were present in varying degree in each of the 164 cases. In addition to this evidence of cardio-pulmonary disability, 110 had already progressed to the stage of (congestive) failure of the right side of the heart as evidenced by one or more episodes of hepatomegaly, ascites, and peripheral edema; 59 had had one or more attacks of frank hemoptysis, in several instances to an almost exsanguinating degree. This does not include the many who had expectorated frothy material during bouts of pulmonary edema.

In 21, cerebral, visceral, or peripheral emboli had occurred on one or more occasions. Of these 14 had auricular fibrillation, 7 had normal sinus rhythm, and all but 6 had a history of one or more attacks of congestive failure. It is of considerable interest that only 9 of these had gross thrombi in the left auricular appendage at operation. In 1 additional case the pathologist was able to report the presence of a small thrombus deep in the trabeculae of the excised appendage which was not noted during the commissurotomy. Of greatest significance is the fact that no recurrent embolic episodes have occurred in any of these 21 cases (longest period since operation: three years). It has been emphasized previously that ligation of the base of the left auricular appendage was responsible for this result. However, of equal, if not greater importance, would seem to be the relief of left atrial stasis accomplished by opening the valve.

Status upon Admission (table 3).—In the initial phase of this surgical program, every attempt was made to select cases of relatively pure mitral stenosis to insure a proper base line for evaluation of the surgically treated stenotic valve alone. It has since become apparent that the auscultatory findings of a minimal to moderate systolic mitral and/or aortic systolic or diastolic murmurs, in addition to the classical mitral diastolic murmur, may be of little consequence provided mitral stenosis is the predominant factor in the production of the patient's disabling symptoms. Ninety-seven were classified as "pure" mitral stenosis when no regurgitant jet could be felt by the exploring finger at the time of surgery. Prior to this, on purely auscultatory grounds, at least one-third of these had been thought to have associated mitral insufficiency which could not be corroborated at the operating table. It is thought, therefore, that, contrary to classical teaching, pure mitral stenosis can, and not infrequently does, occur without accompanying regurgitation. In 42 cases, there was an associated minimal (grade 2 systolic murmur) mitral insuffi-

TABLE 3.—*Admission Findings in 164 Cases of Mitral Stenosis.*

Findings	No. Cases
"Pure" mitral stenosis	97
Mitral stenosis with insufficiency	42
Mitral stenosis with insufficiency and aortic insufficiency	11
Mitral stenosis with aortic insufficiency	14
Left ventricular enlargement (large normal to minimal) in roentgenogram	24
Auricular fibrillation	69 (42%)
Congestive heart failure	43 (26%)
Electrocardiogram: Right axis deviation	140
Normal axis	23
Left axis deviation	1

ciency, and in 7 others there was aortic insufficiency of minimal degree. In 14 patients a mitral diastolic rumble and an aortic diastolic murmur were the only murmurs heard. Four others were also complicated by the presence of an aortic systolic murmur of minimal degree.

In the selection of cases for surgery, it is obvious that the careful auscultatory examination by an experienced cardiologist is paramount. The recognition of a typically uncomplicated mitral stenosis by stethoscopic methods presents no problem. The difficulty does not lie with this type of patient but rather with the one who presents evidence of coexisting mitral stenosis and insufficiency, or multivalvular disease. Here, the physician must decide whether the mitral stenosis is the predominant lesion. Expert fluoroscopic and radiologic evaluation, with emphasis on individual chamber enlargement, can be of inestimable value in this respect.

One hundred forty of the cases presented a normal left ventricle, and in 24 there seemed to be minimal enlargement. In these 24, mitral insufficiency or associated aortic valvular disease was dynamically expressing its presence by enlargement of the left ventricle, a finding which we have come to regard as evidence tending to contraindicate surgery. Slight enlargement of the left ventricle, due to mitral insufficiency, is not an absolute contraindication but suggests the possibility of a more equivocal surgical result. If left ventricular enlargement is due to an aortic valvular lesion, commissurotomy would seem to be inadvisable at this time. The recognition of minor degrees of left ventricular enlargement in the presence of a markedly enlarged right ventricle may well be perplexing. Enlargement of all chambers of the heart is an absolute contraindication.

Auricular fibrillation is not a contraindication to surgery per se unless the ventricular rate is entirely uncontrollable. Sixty-nine patients had auricular fibrillation and the eventual results have compared quite favorably with those who had sinus rhythm.

Forty-three patients presented themselves in various stages of congestive heart failure, although many others were known to have been in this state prior to admission. This failure was well controlled before surgery in all but 13, wherein there existed many years of chronic failure. Except for minimal clinical evidences these, too, eventually responded. The period of medical preparation of patients in this status was more prolonged, and in several instances six weeks or more were required. Some of the more dramatic results were achieved in this group after a prolonged period of convalescence.

The importance of hypertension of the pulmonary circulation in the natural history of mitral stenosis has been appreciated for many years. Such classic symptoms as dyspnea, orthopnea, and hemoptysis have been thought to be indications of increased pressure in the pulmonary vascular bed. The roentgenologist and pathologist have supported the clinician's contention of the importance of pulmonary hypertension by describing hypertrophy of the right ventricle, marked enlargement of the left atrium and pulmonary artery, and sclerotic changes in the large and small pulmonary arteries.

In patients with mitral stenosis, catheterizations of the right portion of the heart have recorded high systolic pressures in the right ventricle. Borden and others[5] found a rough correlation between the degree of pulmonary artery hypertension and the clinical manifestations. Comparable findings and correlations were observed in 45 of our first 50 patients in whom catheterization of the right side of the heart was done. The upper limits of the pulmonary artery pressure found in this laboratory in normal subjects is 30/10 mm. of mercury. As might be expected, the higher the pressure in the pulmonary artery, the closer the correlation with the clinical and roentgen findings. Usually a systolic pulmonary artery pressure of 50 mm. or greater was associated with a history of prolonged functional disability, episodes of acute pulmonary congestion, hemoptysis, or congestive failure. Such pressures, also, were commonly associated with fluoroscopic and roentgen-ray evidence of marked left atrial and right ventricular enlargement and dilated pulmonary arteries. Electrocardiograms in 140 of this group showed right axis deviation (plus 90 degrees or more), thus reflecting somewhat the severity of pulmonary hypertension.

In a previous communication[13] the early results of commissurotomy upon the pulmonary arterial pressure have been presented in great detail. In general, it may be stated that the higher the preoperative pressure the greater the postoperative drop, noted particularly in those pressures above 80 mm. of mercury systolic in the pulmonary artery. Those ranging between 40 and 80 mm. systolic naturally dropped correspondingly less. The overall average drop in pressures of the right side of the heart and pulmonary artery within one month of surgery was 15 mm. systolic (extremes 0-40).

Of much greater interest and significance are the pressure changes which develop and stabilize over many months. One can appreciate the difficulties encountered in obtaining long range recatheterization data. Although most patients will and have returned from great distances for postoperative clinical evaluation, few are interested in submitting to a third catheterization (preoperative, early postoperative, and late postoperative). Nevertheless, such data gradually have been obtained in 14 patients ranging from five to twenty-three months after surgery (table 4).

It is well known that readjustment of the pulmonary vascular circulation following valvular surgery may take considerable time; hence the changes noted within the first postoperative month do not necessarily reflect the ultimate pressure or, for that matter, clinical level. Case 11 exemplifies this point. Despite marked improvement in her clinical subjective status at seven months, her pressures were significantly higher than those obtained preoperatively. At sixteen months they returned to slightly under the original level, representing no essential objective improvement in direct contrast to her excellent clinical state which permits her to live a normal life, working full time.

TABLE 4.—*Changes in Blood Pressure* in 14 Patients with Mitral Stenosis Undergoing Commissurotomy.*

Case and Date of Operation	Preoperative		Postoperative						Results
			First			Most Recent			
	Rt. Vent.	Pul. Art.	Rt. Vent.	Pul. Art.	Mo.	Rt. Vent.	Pul. Art.	Mo.	
1. 6-2-50	67/–2 (21)	78/24 (42)	31/4 (13)	30/16 (5)	1	77/11 (33)	75/29 (44)	5	Unimproved
2. 10-18-50	(37)	(72)				29/4 (12)	27/14 (18)	9	Excellent
3. 5-19-50	50/2 (18)	48/24 (32)	31/–2 (9)	36/12 (20)	1	47/4 (18)	52/23 (33)	10	Improved
4. 7-6-50	90/0 (30)	84/40 (55)	108/9 (42)	93/48 (63)	1	50/–2 (19)	50/18 (29)	10	Excellent
5. 11-8-50	57/–15 (39)	57/24 (35)				45/5 (18)	40/19 (26)	12	Excellent
6. 1-23-50	55/36 (42)	49/30 (36)	44/0 (15)	45/22 (30)	1	28/0 (9)	35/10 (18)	13	Improved
7. 11-9-50	93/6 (35)	105/24 (51)				31/3 (12)	38/13 (21)	14	Excellent
8. 1-5-51	32/–2 (13)	30/16 (21)				20/8 (12)	20/6 (11)	14	Excellent
9. 11-3-50	64/–3 (25)	75/27 (43)				30/0 (10)	30/10 (17)	14	Excellent
10. 6-27-49	141/5 (50)	143/56 (85)	46/–2 (18)	44/13 (23)	4	33/14 (20)	36/15 (22)	15	Excellent
11. 7-27-50	68/0 (23)	–	89/8 (35)	89/39 (56)	7	52/5 (21)	–	16	Excellent
12. 2-2-49	90/17 (41)	–	45/0 (15)	50/16 (27)	2	48/3 (18)	–	20	Excellent
13. 4-11-50	100/9 (39)	130/59 (83)	90/2 (31)	98/37 (57)	1	26/5 (12)	24/8 (13)	21	Excellent
14. 11-7-49	43/3 (16)	42/12 (22)				27/5 (12)	–	23	Excellent

*Measured in millimeters of mercury on a Lilly manometer.

Perusal of table 4 will reveal that 11 patients (all but cases 1, 3, and 11) obtained satisfactory and significant lowering of pressures of the pulmonary artery and right side of the heart. Surprisingly, in 8 of these, the drop was practically to normal levels, representing in several a decrease of 50 to 80 mm. of mercury systolic. In each of these 11 the subjective result followed suit so that all are now classified as excellent results by the criteria set forth later. One of the remaining 3 (case 1) is unimproved clinically after temporary initial relief. Another (case 3) is improved clinically to a much greater degree than his pressure changes would indicate. The third (case 11) obtained an excellent result as discussed previously.

The electrocardiogram frequently aids in determining the candidacy of these patients, especially when there is more than one valve defect. Evidence of right ventricular enlargement suggests that the predominant lesion is one of mitral stenosis. It is to be noted that a right axis deviation (plus 90 degrees or more) was present in 140 cases, a normal axis in 23, but more particularly, that in only one instance was there evidence of a left axis shift. In this case, a stage 5 case, mitral insufficiency was found to be equally as prominent as stenosis when the valve was explored. Commissurotomy, although accomplished adequately, had no effect on the course of the patient's irreversible cardiovalvular and pulmonary vascular disease, and she continued unimproved to her death, ten months later. Finding a left axis shift predicates that other factors are at play and a careful reevaluation must follow.

Present Functional Status.—There is no more difficult a task in the compilation of clinical data than to reach agreement on suitable and self-explanatory criteria for the evaluation of surgical results. This is especially true when the pathologic and physiologic pattern of a disease entity, such as mitral stenosis, is so varied. The common ground for comparison would seem to be the functional status of the patient observed at least six months or more after surgery.

Table 5 summarizes the results obtained in this series. Eighty patients are classified as being excellent in that they have been restored to a normal, productive life, enjoying normal activities without obvious limitation: Limitation of diet and mercurial diuretics are no longer necessary. Fifty-four are still taking digitalis, in most instances, however, because neither physician nor patient has gotten around to discontinuing it. Forty-five are considered to be objectively and subjectively improved, as evidenced by their return to almost normal life and activity within their own particular limitations, determined on a trial and error basis. Most of this group are under medication as a precaution because of the demands of their more greatly enlarged sphere of activity. A few, terminally incapacitated, have now become so amenable to therapy that reasonable activity requires digitalization only. The range of improvement in this group varies widely with the condition of the valve found at sur-

TABLE 5.—*Present Functional Status in 164 Cases of Mitral Stenosis Treated Surgically* (6 months to 3½ years postoperative).

Status	No. Cases	%	
Excellent	80	48.7	76
Improved	45	27.4	
Unimproved	20	12.1	
Deaths			
Operative	10	6.0	
Late (8-stage 5; 1-stage 3)	9	5.4	

gery and the degree to which valve function could be restored. Their progressive downhill course has been abruptly terminated or reversed, some to regain a high level of efficiency and others to remain on an improved plateau.

Nineteen have been essentially unimproved. Seven of these had multivalvular disease with significant mitral insufficiency, the seriousness of which was appreciated only at the time of valve exploration. Psychoneurosis of major degree became more prominent after surgery in 4, making cardiac evaluation difficult, although 3 were considered improved from a circulatory standpoint by their referring physicians. In 3 there was aneurysmal dilatation of the left atrium, with associated mitral insufficiency. The pathologic nature of 3 other valves was such that a satisfactory commissurotomy could not be accomplished. The inadvertent production of significant amounts of insufficiency by opening the posteromedial commissure too widely militated against a good result in the final 2.

The operative mortality in the 164 cases under complete analysis was 6.1 per cent (10 cases). As might be expected they all occurred in the more advanced stages of the disease (stages 3, 4, and 5).

TABLE 6.—*Causes of 19 Deaths Occurring in 164 Cases of Mitral Stenosis Treated Surgically.*

Operative		*Later*	
Technical	5	Irreversible cardiovalvular and pulmonary vascular disease with progression into terminal failure (all in stage 5)	8
Split cusps—finger	2		
Medial commissure—Cut too far	2		
Unexplained	1		
Patients near extremis	2	Preexisting insufficiency increased by surgery	1
Cerebral anoxia during surgery	2		9
Unsuspected associated aortic stenosis (forward failure)	1		
	10		

In the 105 cases in stage 3, there were 5 deaths (4.8 per cent). For the most part these were due to faulty technique early in this series when experience was minimal (table 6). Two were the direct result of the finger pressure method, which accounted for the inadvertent splitting of a valve leaflet (in 1 case) or partial avulsion of one leaflet from the myocardial wall beyond the commissure (in 1 case). In one other there was no anterolateral commissure present and wide incisional separation of the posteromedial commissure produced a lethal insufficiency with the patient dying three weeks after surgery. Hypotension throughout surgery with its attendant cerebral anoxia was responsible for death within two hours of an otherwise satisfactory technical commissurotomy. The fifth death was due to forward failure in a patient who, at autopsy, proved to have an unsuspected severe aortic stenosis in addition to the mitral stenosis for which she was operated upon.

The cause of 3 deaths in the stage 4 group was not entirely clear. It was thought that 1 was due again to hypotension and cerebral anoxia as the patient died without reacting in six hours. Postmortem examination revealed a generalized cerebral edema and nothing else to account for his demise. The second case was totally unexplainable; the patient should have done well and no autopsy was permitted. The third was brought about by the surgical production of too much regurgitation from a bilateral commissurotomy in which the posteromedial commissure was opened too widely. It was further complicated by a left hemiplegia.

Both fatalities in the stage 5 cases were in patients in the extreme terminal state. One was in uncontrolled congestive failure and the operation was done under great pressure. The other required continuous oxygen in the semi-Fowler position, and yet seemed free of clinical decompensation. Examination later uncovered the extensive pulmonary fibrosis and generalized irreversible cardio-renal-hepatic changes.

There were 9 additional deaths which occurred from one month to two years after surgery (table 6). All but 1 of these were grouped as terminally incapacitated, irretrievable cases by the classification outlined in table 1. One died from multivalvular disease with mitral insufficiency increased by surgery. The other 8, despite an adequately performed valvular operation in keeping with the pathologic conditions encountered, died because irreversible cardiovalvular and pulmonary, hepatic, or renal vascular changes which no mere relief of mechanical obstruction could alter were present. They represent failures on the part of an unsuspecting medical profession. At this stage in the development of cardiovalvular surgery, they are excusable and in a sense may be regarded as tragic examples with which all physicians must be reeducated. With a greater understanding of the inherent nature of progressive mitral stenosis and the clear demonstration of a technically successful operation, both as to a low mortality and the satisfactory results obtainable, the selection of patients at an early stage now becomes the paramount duty of every practicing physician, and procrastination can no longer be tolerated.

Indications for Commissurotomy

In the light of the foregoing presentation, the selection of patients for surgical intervention can be simply stated. The ideal candidate is the patient with pure mitral stenosis and beginning symptoms of cardiopulmonary dysfunction such as shortness of breath upon exertion. Fatigue out of all proportion to the patient's physical activity is frequently a prodromal or accompanying finding. At the moment

the mere presence of a well defined mitral diastolic murmur without accompanying symptoms is regarded by many as insufficient reason to suggest surgery. No doubt the day will come in the very near future when such a course will seem unreasonable. No one today awaits the complications and end results of mechanical deformities such as patent ductus arteriosus or coarctation of the aorta before proceeding to their surgical correction. On the contrary, it is the accepted operative practice to proceed shortly after the diagnosis has been made clear and long before symptoms and signs of irreversible damage have supervened. Surgery for mitral stenosis at such an early stage would carry an infinitely lower mortality than it does today, and much cardiac disability might be obviated.

All other indications for commissurotomy are merely compromises from the ideal but for years to come an understanding of the more advanced but altogether salvable states is essential. An outline under seven major categories will most succinctly serve this purpose:

1. History
   a. Early cardio-pulmonary dysfunction—ideal.
   b. Marked dyspnea, hemoptysis, reversible failure—acceptable.
2. Age: Elastic range—physiologic rather than chronological.
3. Valvular defect.
   a. Pure mitral stenosis—ideal.
   b. Associated mitral insufficiency and/or aortic valve lesion in presence of normal left ventricle—acceptable.
4. Roentgen findings.
   a. Left atrium and right ventricle minimally enlarged —ideal.
   b. Minimal left ventricle enlargement—questionable but acceptable.
5. Electrocardiogram.
   a. Normal electrical axis or right ventricular strain—ideal.
   b. Left axis shift—never acceptable.
   c. Auricular fibrillation with controllable ventricular response—acceptable.
6. Functional capacity.
   a. Stages 1 and 2 (statically incapacitating at the most)—ideal.
   b. Stage 3 (progressively incapacitating)—acceptable.
   c. Stages 4 and 5 (debatable)—occasional good result.
7. Complicating factors.
   a. Arterial embolic episodes
   b. Recurrent hemoptysis
   c. Hypertension (?)

   } Acceptable, and may be urgent.
8. Contraindications.
   a. Acute rheumatic fever.
   b. Subacute bacterial endocarditis until controlled.
   c. Associated marked mitral insufficiency or aortic lesions with all cardiac chambers enlarged.

AORTIC STENOSIS

The problems associated with the surgical alleviation of aortic stenosis have to date presented greater difficulties than any of the other stenotic valvular lesions. There are a number of reasons for this turn of events.

Anatomically, the valve is the least accessible to exploration, for it lies centrally placed within the cardiac mass. In aortic stenosis, the left ventricular myocardium is greatly hypertrophied, which, together with the tremendous vascular pressure within the outflow tract, prevents the use of a subaortic transmyocardial incision for the insertion of finger or instrument similar to pulmonary valvulotomy because of the ensuing uncontrollable hemorrhage. The valve cannot be reached routinely through an auricular appendage. The position of the ostia of the coronary vessels lying directly behind the valve leaflets also makes reconstructive surgery hazardous.

Pathologically, there is an early fusion of the three valve cusps, the margins of which become thickened, rolled, eburnated, and infiltrated with calcium early in the course of the disease. Considerable rigidity about the contracted orifice exists, and although some flexibility of the cusps at their attachments remains, this is less prominent than that present in the stenotic mitral valve. Further, stenosis in a pure state is not the common finding, insufficiency of considerable degree frequently being present to complicate the picture.

Physiologically, because of the slow ejection of a small amount of blood with each left ventricular contraction, the systolic blood pressure does not reach high levels although it is sustained and maintained longer than is usual. Diastolic pressures, however, are relatively high so that the pulse pressure is small and as such these patients are at times even a precarious anesthetic risk.

Clinically, the patient is not primarily dyspneic early in his symptomatic course, nor does this develop unless congestive failure has supervened. He becomes progressively disabled as the cardiac stroke output diminishes with increasing stenosis. Persistence in exertional effort leads to greater discrepancy between supply and demand, both systematically and with regard to coronary flow. The coronary vascular needs of the left ventricle are increased by the large bulk of musculature, thus increasing the relative inadequacy of the coronary flow, partially explaining the anginal or coronary type of pain so often encountered in these cases. For this and perhaps other more obscure reasons such a heart seems less able to tolerate surgical trauma to the same extent as in other types of valvular disease.

Despite these apparent roadblocks, considerable progress has been made. The experimental work

which has been undertaken in an effort to find a satisfactory surgical solution to this lesion has been previously reported.[3] Suffice it to say, given a patient with relatively pure aortic stenosis, of reasonable age (35 to 55), and in whom symptoms have not progressed to the stage of complete incapacitation, dilatation of the stenotic valve can be of inestimable value. Briefly, the operative approach calls for a left anterolateral thoracotomy, the introduction of a dilating instrument through a relatively avascular area of the left ventricle, near its apex and lateral to the left descending coronary artery. The dilator is directed through the valve by passing it over a previously placed wire guide, the tip of which can be felt in the aorta prior to the insertion of the larger instrument through the myocardium (fig. 5A). By compressing the grip handle, the dilating head opens in triangular fashion and, because of its special construction, each of the three flanges settles into the three small angles or commissures of the stenosed valve (fig. 5B). This instrument is the Larzelere-Donaldson modification of the original dilator as devised by Bailey, Glover, and O'Neill.[3]

This operation by the technique described, or by one of its earlier adaptations, has been performed in approximately 25 cases. In the earlier experimental stages the mortality was high, so that even with the present refinements it exceeds 15 per cent. At present this situation no longer exists, and it is safe to predict that surgical relief is now forthcoming with a mortality only slightly higher than other intracardiac procedures. The results in those cases of pure aortic stenosis operated upon to date have been highly satisfactory from the symptomatic standpoint although, as in all surgery of this type, some residual element of auscultatory stenosis remains. The oldest case followed is now two years postoperative, and the patient's initial marked improvement has been maintained to the present time.

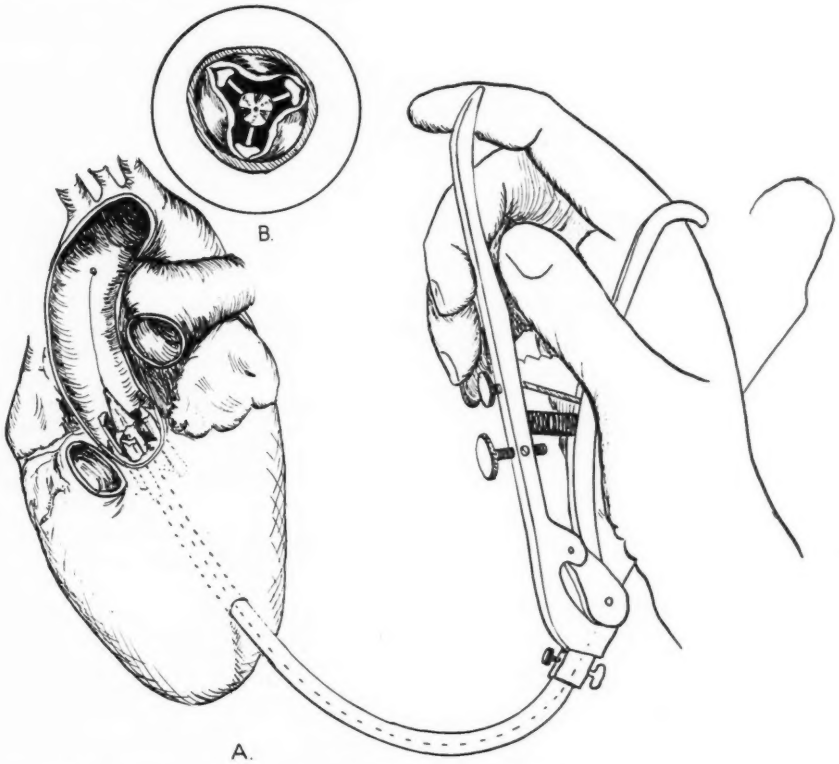


FIG. 5A. The Larzelere-Donaldson dilator inserted through the myocardium of the left ventricle near its apex. This instrument is guided through the aortic valve by threading it over a fine olive-tipped wire previously placed through the valve.

B. The three flanges of the dilating head operating the commissures. The self-rotating head settles automatically into the V-shaped commissures of the fused aortic cusps.

CONCLUSIONS

The surgical management of stenotic valvular disease by the intracardiac approach has been reviewed. All of the heart valves in stenosis, with the exception

of the tricuspid, have been successfully relieved. Technically, surgery as devised for the mitral and pulmonary valves, and to a lesser extent the aortic valve, has reached a high state of perfection and can be recommended without qualification. Provided the patient is referred for surgical intervention early in the course of his symptomatic progression, such a patient can be restored to a high level of efficiency and, as such, can enjoy a more normal life as a useful and productive citizen. The burden of selecting patients at an early stage rests squarely on the shoulders of the physician, and this responsibility can no longer be avoided or postponed.

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A TECHNIQUE OF CARDIAC CATHETERIZATION

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CARDIAC catheterization is a diagnostic procedure which has evoked widespread interest in the past six years. It is of special benefit in determining left to right shunts, the presence of anomalous channels, and pressure relationships in congenital heart disease. It also has been used to aid in the selection of patients for mitral commisurotomy. Further, it is a useful procedure for studying the hemodynamics of the lesser circulation with special reference to pulmonary function. Because of the general unavailability of a detailed technical description of this procedure, a report of the technique used at the Houston Veterans Administration Hospital is being made.

Patients are selected for cardiac catheterization only after complete history, physical examination, necessary laboratory studies including fluoroscopy, chest roentgenogram, and electrocardiogram have been made. Catheterizations are seldom performed before the age of 2 years or until the weight is 25 pounds. Although the presence of congestive failure is not an absolute contraindication, it is a relative one and attempts are made to have the patient well compensated before doing the procedure.

The catheterization is done in the fasting state. The morning of catheterization an inguinal area is shaved to permit needle access to the femoral artery. One hour prior to catheterization the patient is given pentobarbital 0.1 Gm. and quinidine 0.2 Gm. by mouth. The patient is given Demerol 50 mg. intramuscularly on call. Depot penicillin or other suitable antibiotic is started the day prior to catheterization and continued for three days.

On arriving in the catheterization room, the patient is placed in a supine position on a horizontal fluoroscope with a pillow under the head and a rubber ring under the hips. Electrodes are placed on the upper part of the right arm and the left leg and are connected with a four channel Sanborn Polyviso direct wiring electrocardiograph. Tracings are run at frequent intervals during the procedure (fig. 1). The

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left arm is painted with tincture of merthiolate and the antecubital fossa is draped with sterile towels. Using aseptic technique including the use of a sterile gown, gloves, and a face mask, the area overlying the antecubital vein is infiltrated with 2 per cent procaine solution. A tourniquet is applied above the elbow, an incision is made with a scalpel, and by blunt dissection the vein is freed. Loose sutures are placed on the proximal and distal ends of the freed vein and are used to control bleeding once the vein is opened. The vein is incised transversely with a pair of eye scissors, and a small pair of eye forceps are inserted into the vein and allowed to spread open. With this opening the catheter is readily allowed to enter. The tourniquet is then released and the distal segment of the vein is occluded by a hemostat, or bleeding is controlled with a suture. The latter remains in place until the procedure is completed.

The usual catheter used in an adult is an 8F 100 cm. heart catheter with a single lumen, although the size may vary from 6F to 9F, depending on the size of the vein, and from 100 to 125 cm., depending on whether or not it is desired to pass the catheter beyond the main pulmonary artery (fig. 2). A double lumen catheter is available for use when it is desired to take simultaneous blood samples from two sites. This catheter has openings at the tip and 10 cm. proximal to the tip. The catheter is connected by means of a three way stopcock to a bottle of 5 per cent glucose in distilled water which has 40 mg. of heparin added to each 1,000 cc. of solution. The bottle is elevated to a suitable height to overcome the intracardiac pressure. The solution is allowed to drip at a rate of about 40 drops per minute. This prevents blood clotting in the catheter. It is important that the catheters be neither too rigid nor too pliable. If the former condition exists, there is danger of causing injury to the heart or vessels. If the latter exists, difficulty of manipulation occurs. Catheters that are too pliable may be made more rigid by a rebaking process.

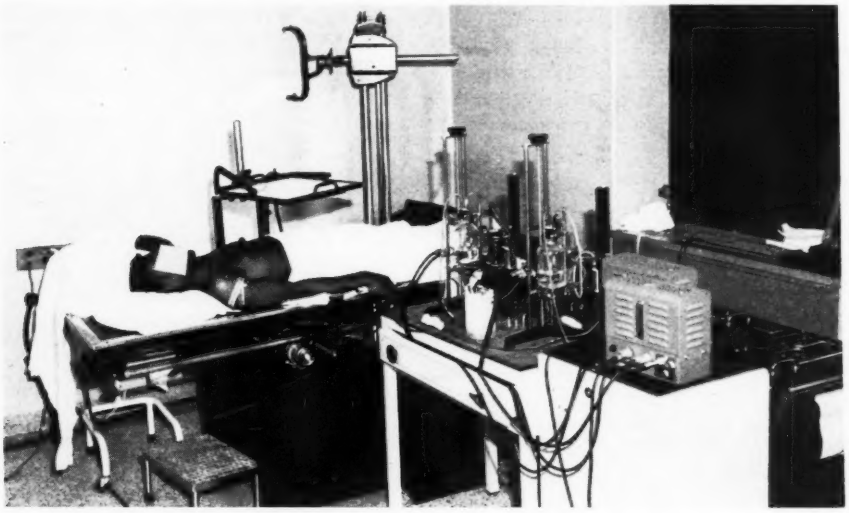

FIG. 1. Photograph showing the patient lying on the fluoroscopic table with two Electromanometers in the foreground and the Polyviso machine in the background.

The catheter is rapidly introduced in the antecubital vein and its course is followed by fluoroscopy. As the catheter passes through the subclavian vein some sensation may be perceived by the patient, but after this there is usually no unusual sensation or pain. Care must be taken to prevent the catheter from going up the jugular vein to the head, across to the

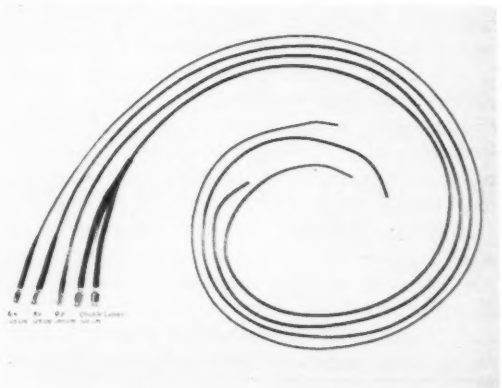

FIG. 2. Several of the catheters which are used for cardiac catheterization.

opposite subclavian vein, or down the inferior vena cava. By means of twisting the catheter, some degree of control of direction is effected as the catheter has a curved tip. The tip is introduced into the right atrium to the ventricle and the pulmonary artery. From here it is pushed out the right or left pulmonary arteries to the finer branches where it becomes lodged. This is the site where "pulmonary capillary pressure" is obtained. During this passage observations are made as to the course taken by the catheter.

FIG. 3. Air sample being evacuated from the Douglas bag and measured in the Tissot spirometer.

If patencies exist in either the auricular or ventricular septa, or if a patent ductus arteriosus is present, the catheter may take an abnormal course.

A Cournand needle is introduced into either the right brachial artery, just above the elbow, or the femoral artery in the previously prepared inguinal area. After it is made certain that the needle is firmly within the artery, it is anchored with adhesive tape for future use. If surgical exposure of the brachial artery becomes necessary to obtain an arterial blood sample, the needle is sutured to the surrounding skin for stability.

Pressure determinations are made in the "pulmonary capillary," pulmonary artery, right ventricle, right atrium, and brachial or femoral artery. In the first three locations determinations are made before and during exercise. These determinations are made with the aid of a Sanborn Electromanometer.

Blood samples are obtained from the above locations. These are obtained by disconnecting the catheter from the three way stopcock, attaching a syringe, and withdrawing 5 cc. This is discarded and a new oiled 10 cc. syringe is attached. This syringe was prepared by dipping the plunger into sterile mineral oil and replacing it in the barrel of the syringe. The plunger was then removed, dipped into a small amount of powdered heparin, and replaced in the barrel. This prevents the blood from clotting and eliminates the possibility of dilution of the blood sample. Collection of blood is carefully done to prevent air bubbles from occurring in the syringe. After collection, the blood is emptied into test tubes under

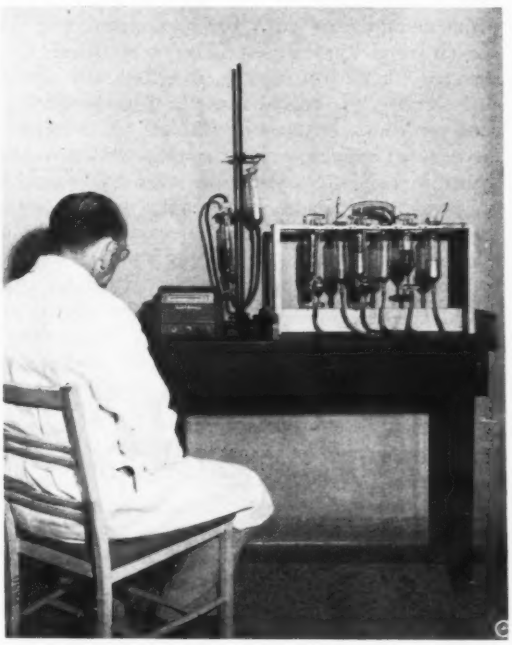

FIG. 4. Determination of oxygen content of air sample in the collection bottle by use of the oxygen analyzer.

oil and stirred with a metal rod to prevent clotting. As an alternative method, mercury sealed, capped syringes may be used in which case the blood is mixed by inverting the syringe and allowing the mercury to flow from top to bottom. The entire syringe is then placed in ice; or if the previously mentioned method is used, the test tubes are placed in a beaker of ice. They are then taken to the laboratory for determination of blood oxygen content by the manometric method of van Slyke.

Cardiac outputs are determined in the resting and exercise states and are calculated by the direct Fick principle. In this method the cardiac output in liters per minute is determined by dividing the arteriomixed venous blood (right ventricle or pulmonary

artery) oxygen content difference into the number of cubic centimeters of oxygen used per minute. The latter is determined by having the patient breathe into a Douglas bag for three to six minutes. Half-way through this period simultaneous arterial and mixed venous blood samples are collected. During the exercise period the patient is made alternately to extend and flex the extremities which are not being utilized in the collection of samples at a rate of 25 times per minute. The air samples in the Douglas bags are mixed well by compressing the bags and a sample is withdrawn in a glass collection bottle under mercury. The volume of the air in the bags is determined by withdrawing the air into a Tissot spirometer (fig. 3). The air samples in the glass collection bottles are then analyzed for oxygen by use of a Beckman oxygen analyzer (fig. 4). This also may be done by the Haldane procedure. By knowing the oxygen content of the inspired air, the quantity and oxygen content of the expired air, and the time consumed in the breathing period, it is possible to determine the quantity of oxygen consumed per minute. Before the oxygen analyzer became available, oxygen consumption was measured by having the patient breathe in and out of a basal metabolic rate machine during the period cardiac output was being checked. This method is not as accurate as the previously mentioned one and is subject to all the errors common to basal metabolism determinations.

After the pressure determinations have been made and the blood samples have been withdrawn, the Cournand needle and the cardiac catheter are removed. The vein is not sutured but the overlying skin is. Pressure is applied by use of an elastic bandage for the first six hours postoperatively. Direct pressure is maintained by a thumb placed over the arterial puncture site for ten minutes after the needle is removed. No limitations are made on the patient's activities postoperatively, and he is allowed to eat lunch.

COMPLICATIONS

Cardiac catheterization is not without complications, and the value gained from this procedure must be weighed against the possible complications. Among the minor complications are the development of thrombophlebitis in the antecubital vein and the development of a hematoma at the site of arterial puncture. As the catheter tip passes through the right atrium to the ventricle, rhythm disturbances frequently are observed. Usually there is nothing more than a few premature ventricular contractions which disappear without therapy. Intravenous quinidine and Pronestyl are kept on hand for possible use with the more serious disturbances, should they arise. Fatalities do occur as a consequence of cardiac catheterization, although in our hands this rate has been well below 1 per cent. When death has occurred, it has followed overdistention of a rigid pulmonary circuit from the constant drip through the catheter.

SUMMARY

A detailed technical description of cardiac catheterization has been given with mention of the chief indications and complications.

Cortisone in Chronic Skin Disease

Successful use of cortisone as medication in cases of severe atopic dermatitis is described by three Los Angeles physicians in the March 15 issue of *The Journal of the American Medical Association.*

Drs. Thomas H. Sternberg, Victor D. Newcomer, and Irwin H. Linden express the belief that cortisone is the first medication that has been consistently beneficial in influencing the course of atopic dermatitis, a chronic eczema often associated with hay fever or asthma. Intramuscular administration proved most effective; itching subsided twenty-four to forty-eight hours after treatment began, and complete healing of dermatitis was obtained in ten to fourteen days in all except 1 case.

After treatment was discontinued, relapses occurred, the physicians pointed out, and the most objectionable feature of cortisone therapy was development of depressive reaction coincident with relapse.

Cost of Radioisotopes Used in Cancer Studies

Beginning July 1, 1952, the United States Atomic Energy Commission is making available for 20 per cent of production costs radioisotopes to be used in the study, diagnosis, or treatment of cancer. Since 1948, $1,400,000 worth of radioisotopes for cancer studies has been distributed under this program free of charge for production costs. Users have paid transportation and handling costs.

The distribution program was established to provide a stimulus for exploration of methods of using radioisotopes against cancer. The Commission's Advisory Committee on Isotope Distribution and Biology and Medicine have agreed with the view of the Atomic Energy Commission that the stimulus of completely free distribution no longer is necessary to encourage the use of radioisotopes in the field of cancer. Making radioisotopes available for cancer studies during the next fiscal year at 20 per cent of Atomic Energy Commission catalog prices, which reflect production costs only, the Commission will provide radioisotopes for cancer at a price less than the cost of production. To obtain radioisotopes for 20 per cent of the catalog price, users must specify that the material will be used for cancer research, diagnosis, or therapy.

Music Therapists Hold Meeting

The National Association for Music Therapy will hold its third annual meeting in Topeka, October 30-November 1 in the Hotel Kansan. Members of the medical profession who are not members of this association may attend meetings by paying a registration fee of $5. Inquiries may be addressed to Wayne Ruppenthal, publicity committee chairman, 2700 West Sixth, Topeka.

ARTIFICIAL FEMORAL HEAD REPLACEMENT IN HIP JOINT DISORDERS

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AN entire new vista in joint surgery has resulted from the successful early results of the use of hip prostheses. Heads of femurs have been removed for numerous pathologic lesions and replaced with metal, acrylic, or nylon replicas. The early relief from pain and the amount of return of function of the hips has been extremely encouraging. Final evaluation will require several years, but this procedure has already taken a prominent position in reconstructive surgery of the hip.

Major credit for establishment of this ingenious method is due Drs. Jean and Robert Judet of France. They have recently reported 400 cases with a follow-up of from one to five years. Their high percentages of good and excellent results has stimulated widespread interest in and trial of prosthetic hip joint replacement. The literature does contain previous references to this subject. Delbet in 1919 utilized a reinforced rubber prosthesis. In 1926, Robineau replaced the upper third of a femur with a rubber and steel substitute. Aluminum and stainless steel also have been used. Moore and Bohlman introduced a vitallium replica in 1943, and Stuck a similar one in 1948. All sorts of holding devices were attempted, generally a combination of screws and lock nuts. Acrylic replacements for the humerus were instituted by Mellen and Phalen in 1947. Bohlman introduced a metal model after which the Judet prosthesis is patterned with a central intramedullary stem. However, prior to the Judet reports, the prosthesis experiments were limited to one or a few cases. Recently, more extensive use of more complicated metal prostheses has been reported by McBride, Jaenichen, and Peterson.

The Judet type of prosthesis has received widest acclaim. Concomitantly, there have been the usual vast number of modifications. We have utilized the prosthesis in its original form in acrylic, metal, and nylon. We have to date preferred the nylon model introduced by MacAusland, who reported similar good early results. Nylon is lighter than metal and is not radiopaque. It is stronger and less brittle than acrylic and remains inert under all types of sterilization. However, we have noted no difference in early end results with any of the three types.

PROCEDURE

Indications for replacement arthroplasty have included (1) osteoarthritis of all types and etiology, (2) nonunion of fractures of the neck of the femur, (3) certain fresh fractures of the femoral neck in which union is less likely to occur, (4) old rheumatoid or septic arthritis with deformity, (5) advanced Legg-Perthes disease or slipped upper femoral epiphysis, and (6) old congenital dislocation of the hip.

METHOD

We have performed replacement arthroplasty in 45 instances. The anterior approach to the hip was used in 8. The posterolateral approach of Kocher-Langenbeck as recently described by Gibson was utilized in the remainder. We consider the latter as vastly superior. It is rapid, simple, and relatively avascular while being extremely extensile. There is a minimum of interference with the surrounding musculature and any internal fixation can be removed through it.

The lesion present determines the procedure on the femur. The head is always excised. Dislocation and osteotomy of it may be necessary prior to excision. The acetabulum is modeled when necessary. A metal corer is inserted down the medullary canal of the femoral neck until it pierces the lateral cortex just below the greater trochanter. This should be done parallel to the anterior and inferior surfaces of the femoral neck for best position. The top of the neck usually requires trimming to fit under the head of the prosthesis. This is easily accomplished by a shaper of proper circumference which also trims the neck stub smooth.

A suitable prosthesis is then chosen. Length of the

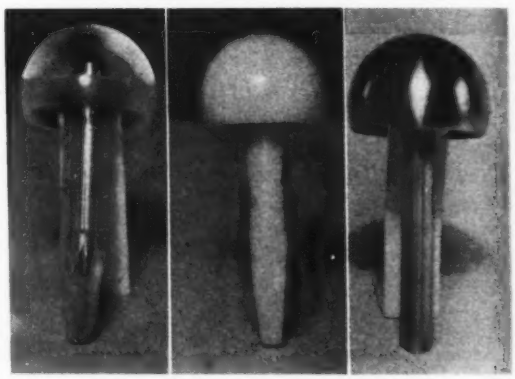

FIG. 1. Plastic, nylon, and Vitallium prostheses.

Read before the Section on Surgery, Texas Medical Association, Annual Session, Dallas, May 6, 1952.

stem is determined by the three markings on the metal corer. The stems contain a stainless steel rod for radiographic visualization. The correct head size can be secured from checking with the removed femural head and the acetabulum. The head is undercut to fit on the neck stub.

The stem of the selected prosthesis is inserted into the cored medullary canal of the neck of the femur. An aluminum impactor and ordinary mallet are used

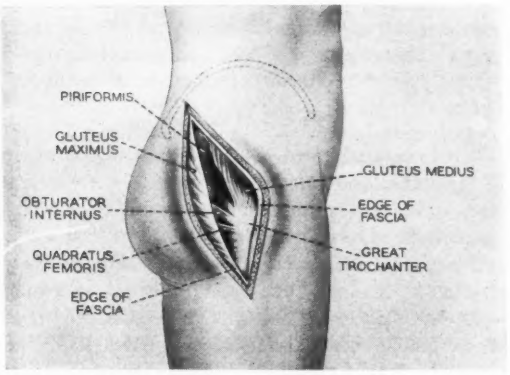

FIG. 2. A drawing showing the posterolateral approach to the hip joint.

to drive in the prosthesis. The stem should project into the lateral femoral cortex and should fit tightly in the medullary canal. The head should impact well around the top of the neck. Position should be moderate valgus. The femur is rotated to reduce the prosthetic head into the acetabulum and the joint is tested for stability. The leg is held in abduction by placing several pillows between the knees for repair of the hip abductors without tension. The wound is then closed in layers.

Postoperative care has for the most part consisted of maintaining the extremity in abduction and slight internal rotation. Abductor tenotomy has been almost routine in the osteoarthritis cases. We have utilized plaster boots with a crossbar, a simple suspension frame, or occasionally a pillow between the legs. Quadriceps exercises are begun and the patient is placed in a wheel chair frequently. In ten to twenty-one days all such apparatus is removed and active exercises are instituted. Crutches and weight-bearing are allowed as soon as possible. Crutches and cane are discarded as improvement permits.

RESULTS

The high percentage of painless functioning hips in the Judet presentations is unparallelled by any combination of reconstructive procedures previously available. Other European surgeons, notably Verbrugge, Sicard, and Perrot have duplicated these reports in small series. Thompson and others utilized a similar type of prosthesis with favorable end-results. MacAusland's recent summary of 31 cases has been similarly encouraging.

Our series includes 45 prosthetic replacements in a similar number of patients since March, 1951. In 13 instances the indication was a nonunion of a fracture of the neck of the femur. Twenty-four fresh nonimpacted high-cervical or sub-capital femoral neck fractures were so treated primarily. Seven patients with osteoarthritis have received prostheses. One was inserted for rheumatoid arthritis with ankylosis. The age grouping is shown in table 1.

TABLE 1.—*Age of Patients Fitted with Hip Prostheses.*

Age Groups	Fresh Fracture	Nonunion	Osteoarthritis	Rheumatoid Arthritis
21-30				1
31-40	2	2	2	
41-50				
51-60	1	2		
61-70	6	5		
71-80	8	4	1	
81-90	8	2		
91 plus	1			

Complications known to occur in the varied reports concerning this procedure are listed in table 2. We had no operative deaths. Three patients have died

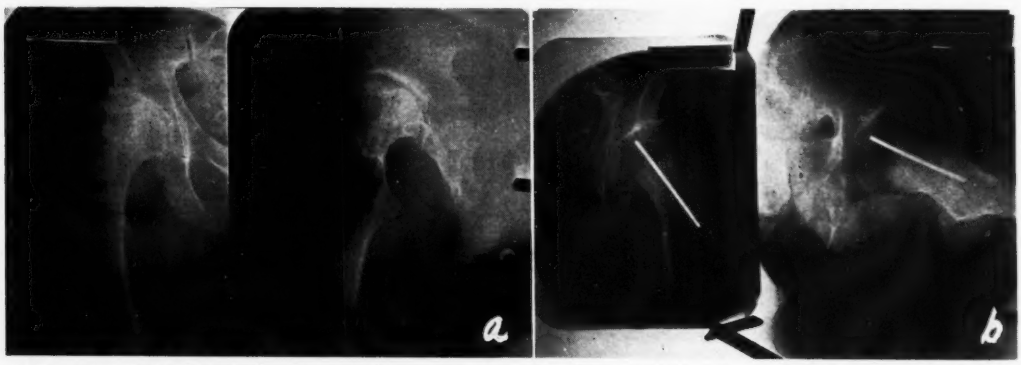

FIG. 3a. Osteoarthritis of the hip in a 39 year old man.

b. Nylon prosthesis in place of the deformed femoral head in the same patient.

since—2 from entirely extraneous causes; an 84 year old woman expired five weeks after surgery without ever having managed to get up and about even with crutches. No infections were noted. Two patients developed a moderate thrombophlebitis.

Soft-tissue calcification is present in 3 instances. Two of these patients are asymptomatic. The third is an elderly woman confined to a wheel chair with a severely painful hip. Osteophytes in 7 cases have in no way affected progress or end-result. A prosthesis could not be utilized in one patient with a nonunion

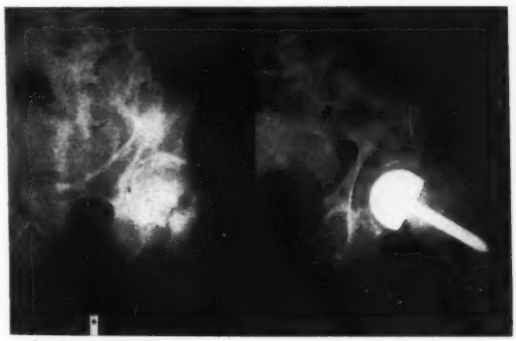

FIG. 4. Nonunion of a fracture of the femoral neck on the left. The Vitallium replacement is shown at right.

of a femoral neck fracture and osteoporosis. The femur was fractured during attempted rotation and a subtrochanteric osteotomy was performed. Another patient with a similar nonunion and osteoporosis has a prosthesis in place, but six months following this surgery she has been unable to progress beyond standing beside her bed.

No dislocations have occurred. Transplantation of the trochanter has been required in 3 instances to provide sufficient neck and prevent dislocation. Two prostheses were inserted in more varus than is desirable. Both are satisfactory to date but remain a cause for concern. Trochanteric abutment has not occurred—transplantation of the treater trochanter has already been mentioned. Two patients have an adventitious bursa with localized soreness over the site of protrusion of the prosthetic stem through the lateral femoral cortex. No prosthesis has loosened or shown any evidence of reaction in body tissues.

Relief of pain has been striking. Only one person mentioned previously has had severe pain. Four others have complained of moderate to mild pain localized in the hip joint. Several patients have had soreness in gluteal and thigh musculature; this has disappeared as the tone and strength of these muscles improved. Weather has had a varied mild effect. A gluteal limp has been constantly present. It was prominent early and rapidly improved with exercises and walking.

TABLE 2.—*Complications in Reconstructive Procedure about the Hip.*

Death	Varus and abutment
Infection	Trochanteric abutment
Thrombophlebitis	Adventitious bursa
Myositis ossificans	Transient footdrop (secondary to sciatic nerve traction or cast pressure in the region of the fibular head)
Osteophytes	
Fracture-osteoporosis	
Dislocation	

The procedure did not produce shortening in excess of ½ inch except for one comminuted neck fracture in which it amounted to ¾ inch. In two nonunions there was a gain of length amounting to ½ inch. Patients with osteoarthritic hips in adduction regained their apparent normal length — adductor tenotomy was performed in these cases.

Motion in these hips reached a functional range. Full extension and flexion to 90 degrees were constant. Further flexion was present in more than half of the group. Rotation was more limited, generally varying from one-third to one-half of normal. Abduction and adduction deformities have developed. Eighty-five per cent of patients could put on and take off their shoes and stockings.

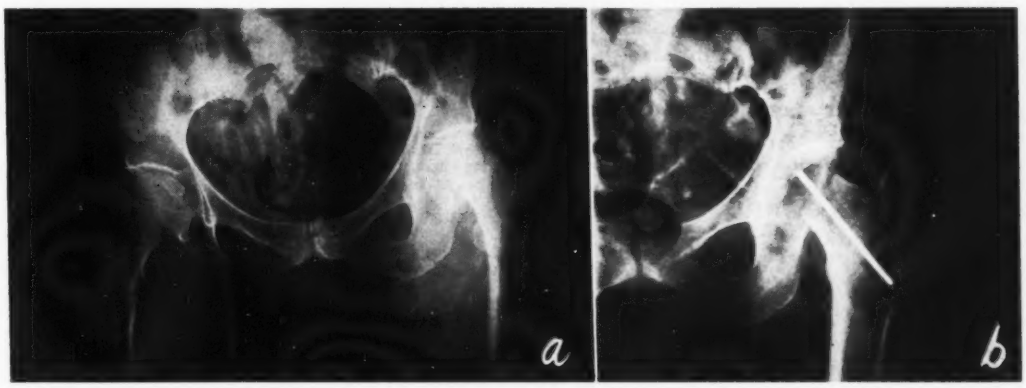

FIG. 5a. Subcapital fracture of the neck of the femur.

b. A roentgenogram of the patient in *5a* showing immediate replacement with nylon prosthesis.

Early ambulation is characteristic. Convalescence is less than two months in 7 cases—too recent for evaluation although 4 of these patients are already up with crutches. Three patients died and 1 moved so that no follow-up is possible. Four of the remaining patients have never walked. Two require crutches at all times—both with a convalescent period of less than six months. Sixteen rely on a cane for the most part. At times, they can discard it for a varying interval. Half of this group underwent surgery in the past six months. Twelve patients use no support at all or carry a cane occasionally for protection on crowded streets and the like.

DISCUSSION

Although this is a report of early results, several observations seem in order. Relief of pain, return of functional motion, and early ambulation are outstanding advantages of this procedure. It is a relatively safe procedure in elderly patients. It is more easily performed through the posterolateral approach.

In osteoarthritis, the maximum amount of neck should be retained. Anteversion of the prosthesis should be avoided—proper placement of the prosthesis is more difficult in the severely deformed hips. Adductor tenotomy is almost essentially routine. A high percentage of good end-results usually is noted in this group.

The procedure is generally more difficult technically in ununited fractures of the neck of the femur. The capsule is markedly thickened; the gluteal muscles are shortened and atrophied. The neck stump is often short; trochanteric transplantation may be necessary. More complications are seen in this group. Poorer end-results are generally noted in these cases too. Prosthetic replacement has many advantages over other hip reconstructions in this problem and at present is probably still the procedure of choice. Most modifications of the Judet prosthesis are designed to meet the neck-absorption problem. Further improvements in this field will appear in the near future.

Use of these prostheses in fresh fractures of the femoral neck merits further consideration. Subcapital and high cervical fractures, particularly those with a more vertical fracture line, are characterized by a lower incidence of union and a higher percentage of complications such as aseptic necrosis and degenerative arthritis. The patients generally are elderly and are better spared the possibility of a second operative procedure since they are often physiologically overtaxed to the point where another period of inactivity might not permit return to an ambulatory state. Prosthetic replacement in fresh fractures of the neck of the femur produces more satisfactory hips than it does in nonunions of these fractures. We feel it is definitely indicated where life expectancy is short. As Gill asked when speaking of arthrodesis of the hip for ununited neck fractures, "If it is the last resort for some patients, why should it not have been for them the first resort?" We have, therefore, resorted to this procedure primarily in many such instances.

Some technical observations in our treatment of fresh fractures have been instructive. The roentgenogram has not always truly depicted either the fracture angle or the amount of comminution. The head fragment was always shorter than we expected. The true length of the neck stub could be better determined by an anteroposterior roentgenogram taken with the extremity in slight internal rotation. The bone at the fracture site is comminuted, soft and sparse—no more substantial than that noted in a Colles' fracture in the same age group. Numerous small free fragments of this bone are attached only to the capsule.

SUMMARY

A review of replacement prosthesis surgery of the hip has been presented. We have utilized it chiefly in the treatment of osteoarthritis of the hip, in selected fresh fractures of the femoral neck, and in nonunions of fractures of the neck of the femur. Early relief of pain and reestablishment of a mobile, stable hip were generally possible. Results in osteoarthritis and in fresh fractures were superior to those in nonunions.

Technically, we have preferred the nylon type of prosthesis, although we have utilized metal and acrylic models in a few instances. The posterolateral approach is rapid, simple, and extensile; it is relatively avascular and provides complete access to the hip and upper femur.

Prosthetic replacement arthroplasty, like every new surgical procedure, must pass through a period of enthusiasm, condemnation, and modification before it is given its proper niche in the therapy of hip disorders.

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ABSTRACT OF DISCUSSION

DR. HANES BRINDLEY, Temple: This paper is an interesting and comprehensive review of this new type of treatment for hip disability. Of course, as the authors state in their concluding paragraph, the results from this new surgical procedure will have to be observed over a long period before we can evaluate it accurately. However, I certainly believe there is a place for this prosthetic femoral head replacement in surgery of hip diseases.

I have used only the Judet type prosthesis and think it is preferable. Also, the nylon does seem to have advantages, primarily in that the operator does not have to be quite so careful in handling the prosthesis. It does not become scratched or marred as easily as the acrylic. This, of course, is only a minor advantage, and in the best result I have to date, an acrylic prosthesis was used. Also I prefer the lateral approach for the reasons pointed out in the paper.

The authors have included in their indications slipped upper femoral epiphysis and congenital dislocation of the hip. If they infer by this that they are going to use the prosthesis in children or young adults, I am afraid I cannot entirely agree with them. However, quite a few orthopedists in this country are now using prostheses in children. I personally would like to see long term results from this procedure before we start putting prostheses in children, and it is very gratifying to notice in the authors' cases that only 5 of the 45 patients were less than 50 years of age, and only 1 patient was under 30 years of age.

I have also been rather reluctant to use the prosthesis in fresh fractures of the neck of the femur although certainly there are cases in which it is justified. I think that only in an elderly person with a high femoral neck fracture vertical in type may the prosthesis justifiably be used. Even though our present treatment of fractures of the neck of the femur still leaves a lot to be desired, I believe I will stick to these rather rigid specifications for fresh fractures. Maybe, later on, if long term results with the prosthesis are favorable, we can be more lenient.

There is one discouraging note to me in this review, and that is the poor results in treatment of non-union of the neck of the femur. It was hoped, of course, that prosthetic replacement of the femoral head would markedly improve the treatment of this condition. Maybe when we learn more about the prostheses, we can also improve these results.

However, it is gratifying to notice that there has been no absorption of bone around the prosthesis; nor has there been any evidence of reaction of the tissues to the prostheses. These, of course, were the two most feared complications. The complications which the authors do list are no more than might be expected with any type of reconstruction procedure.

I would like to mention again, in agreement with the authors, some of the favorable factors in connection with this procedure. These include the short period of convalescence, the early ambulation, the satisfactory range of motion, and freedom from pain. These factors are not present in many other reconstructions of the hip. Especially worth reemphasizing is the short convalescence and freedom from pain.

Conditioning Children for Operations

Preparing a child for surgery so that he will not suffer emotional injury must begin in the home by creating an environment of love, trust, and security which will make the child willing to place himself in the hands of others. This conclusion is expressed in an article of *The Journal of the American Medical Association* by several physicians associated with the Departments of Pediatrics and Anesthesiology of Albany Medical College.

Paramount in the child's mind must be a firm foundation of trust in his parents, the authors say. They list three factors in preventing emotional trauma in the hospital-anesthesia-surgery experience of the child: (1) the child must have made a reasonably adequate adjustment to his environment, (2) he must have proper preparation for the experience, and (3) the experience must be modified to meet his individual endurance.

However, no amount of love and understanding by outsiders will effectively substitute for the child's mother, the article points out. Because the child's emotional welfare is bound up with his physical welfare, provisions should be made for a parent to remain with the hospitalized child before and after the operation.

Clinical Laboratory Chests for Emergencies

A portable clinical laboratory chest for use in improvised emergency hospitals has been developed by the Federal Civil Defense Administration, according to the *Civil Defense Alert.* A wooden chest weighing about 75 pounds when filled will provide facilities for testing blood and spinal fluid and for other examinations required in the emergency treatment of burns, wounds, and other injuries. The supplies will be sufficient for from twenty-four to forty-eight hours of operation. The chest, fully equipped, costs approximately $125. Chests in small quantity are being purchased for trial; procurement of larger quantities for stockpiling in federal warehouses for use immediately in case of attack may be possible if funds are available.

Tuberculosis control workers must take an essential role not only in stimulating the development of necessary services but in spearheading the movement toward an integrated approach in every community. They must draw upon all the agencies, public and private, medical and social, economic and occupational, in building a strong control program.—Joseph W. Mountin, M. D., Pub. Health Reports, February 2, 1951.

A BRIGHTER OUTLOOK FOR THE JUVENILE DIABETIC PATIENT

C. W. DAESCHNER, M.D., Houston, Texas

ON the basis of previous statistical experience[13, 15] the physicians of Texas will see 120 new diabetic children within the next twelve months. A significant number of these juvenile diabetics will be initially discovered with complicating diabetic acidosis, whereas many others will be detected in an earlier phase of their disease. All will present the two-fold problem of regulation and education. Once the patient and his family see the initial crisis under control and once they accept the fact that the disease is chronic, they will ask questions that are difficult to answer. It is this aspect of juvenile diabetes mellitus with which the present report is concerned.

How will this disease affect his future? What type work will he be able to do? Must he always be limited to a specially weighed or measured diet? Must he always take insulin? Should he marry? What are the possible long-term complications? And last, what degree of control must be maintained? The physician must be in a position to answer these questions and be convincing enough in his answers to gain the wholehearted cooperation of the patient and the family for the years ahead. At the same time the thoughtful physician will probably ask himself some questions. How carefully should I attempt to control this patient's diabetes? When and where should I look for the early evidences of degenerative vascular disease? Are there other special problems facing the diabetic child? And finally, are my efforts at good control really justified?

Formerly no real data were available to give conviction to the physician's attitude or scientific support to his answers to the patient. In recent years a body of evidence has been accumulating concerning the long-term prognosis in juvenile diabetes mellitus.[3, 4, 7, 9, 18, 19] Figure 1 is a typical example of the findings in juvenile diabetic patients at the end of the first twenty years of the insulin era.[19] As will be seen, when the degree of control is not considered, the incidence of degenerative vascular disease is directly related to the duration of the patient's diabetes. Superficial examination of this data would imply a poor prognosis; however, careful analysis indicates that this poor outlook need not necessarily apply to today's new juvenile diabetics. Many of the present day therapeutic regimens have evolved from experience gained in the early days of the insulin era. Thus, the best prediction that could be made on the basis of data accumulated to date is not nearly so good as the prognosis this year's new diabetics may actually anticipate. This fact should serve to make the outlook progressively more hopeful and to undergird the family and physician in their care of the patient. However, that this good prognosis is not easy to attain must be accepted as a first rule of therapy.

The term good control defies dogmatic description. It is a variable quality that in the last analysis must be planned to suit the needs of the individual patient. No specific regimen can be applied with equal success to all diabetic patients; however, there are certain broad principles that are generally accepted:

1. Dietary intake should be constant from day to day.
2. The patient should be maintained at low levels of glycosuria—ideally, specimens should vary between negative and 1 per cent with no polyuria.
3. Coma and hypoglycemic shock should be avoided.
4. Normal growth in height and no unusual weight deviations should be expected.
5. Freedom from *severe* intercurrent infections should be sought.

Although not every patient can achieve ideal control continuously, the cooperative juvenile diabetic can be expected to meet these standards most of the time.

COMPLICATIONS

Since the spectrum of complications associated with juvenile diabetes may be broad, the present discussion will be limited to the more common problems. Perhaps these may be discussed most satisfactorily in relation to the duration of diabetic life and the times at which these complications tend to appear.

First Five Years

During the first five years the diabetic patient is concerned chiefly with the day to day regulation, the learning of diet procedures, and the avoidance of ketosis and hypoglycemia. It is during this period that the first long-term complication may begin and it comes usually in the form of emotional rebellion against the regimen imposed by the diabetes. Experience has shown that in the age group from 12 to 16 years, this rebellion may be significant and may result in complete indifference of the patient to his diabetic regulation and his future welfare. In one follow-up study[4] more than 40 per cent of those who

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were beyond the age of 15 years at the time of the survey described spontaneously a period of severe emotional rebellion in their early teens. Many felt that it was a definite factor in their subsequent poor regulation.

It has been the experience of one of the largest and most carefully organized diabetic clinics that most of their juvenile diabetics were refractory to clinic attendance between the ages of 12 and 16 years and were difficult to follow in spite of all possible

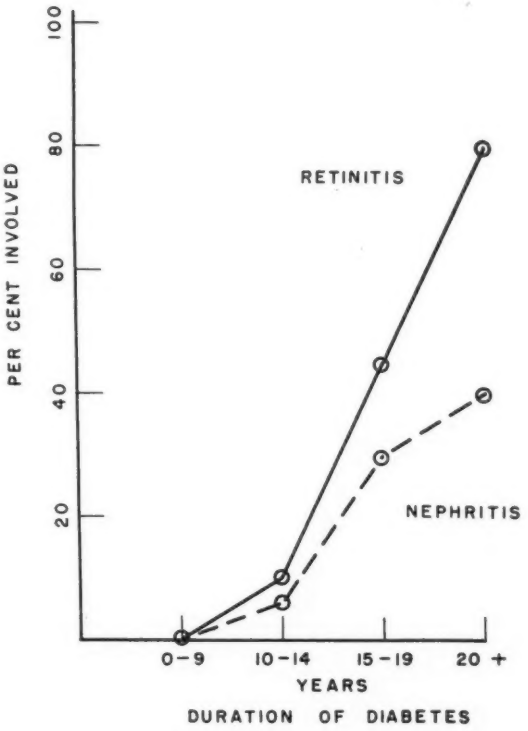

FIG. 1. Incidence of vascular disease in 220 juvenile patients with diabetes. (After White, P., and Waskow, E.: Arteriosclerosis in Childhood Diabetes, Proc. Am. Diabetes A. *8*:141-149, 1948.)

efforts.[17] Hinkle and Wolf[8] have emphasized that such rebellions are more common among adolescents, particularly following conflicts with their parents. Their experimental studies indicate that a variety of stressful life situations may lead to significant metabolic changes. These changes are manifest clinically by diuresis, ketonuria, glycosuria, and altered blood glucose levels. Figure 2 is illustrative of the magnitude of glucose and water loss in a typical stressful situation.

The fluctuations described are similar to those seen in control nondiabetics under stress, but in the diabetic the amplitude of change is accentuated and the subjective changes are more obvious. Hinkle and Wolf expressed the opinion that treatment directed toward alteration of the behavior and attitudes of the patient and his relation to his environment is helpful in abolishing otherwise uncontrollable fluctuations in the course of labile diabetes and in preventing recurrent episodes of ketosis. The physician must anticipate this potential threat to the patient's

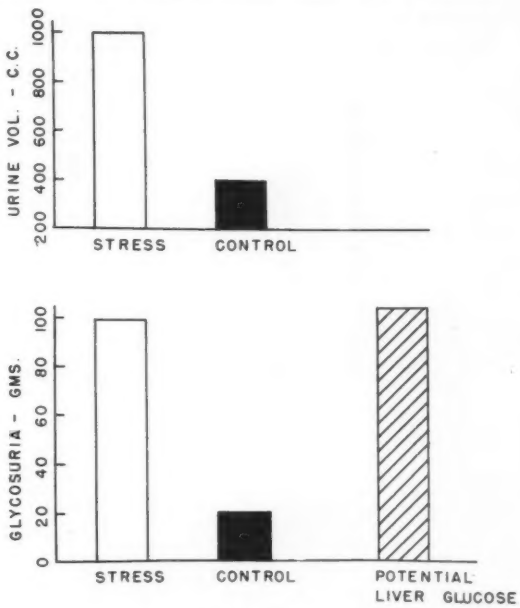

FIG. 2. Response to stress of a diabetic girl aged 15 years. The loss of glucose and of water during two comparable four hour periods, one under normal conditions and one under stress, is pictured. Normal available stores of glycogen are charted for comparison. [After Hinkle, L. E., Jr., and Wolf, S.: Importance of Life Stress in Course and Management of Diabetes Mellitus, J.A.M.A. *148*:513-520 (Feb. 16) 1952.]

well-being, and in his contacts with the patient and the family seek to avoid emotional problems or find their most satisfactory solution. Insofar as possible, regulation should be planned so that the diabetic may participate wholeheartedly in normal social activities of children's and teen-age groups. The physician who directs his efforts from the beginning toward maintaining emotional equilibrium will be well rewarded by the greater degree of patient cooperation and resulting good regulation.

In the meantime the physician's enthusiasm for regulating the patient's diabetes must not allow him to lose sight of his general health and the practice of good preventive medicine. Boucet[2] and associates found tuberculosis twice as common in 3,106 diabetics as in a comparable nondiabetic group. Joslin[11] recorded a mortality rate of 11.2 per cent from tuberculosis in 135 fatal cases of juvenile diabetes mel-

litus. The average duration of the diabetes in these cases at the time of death was thirteen years. Prior to the insulin era no deaths from tuberculosis in juvenile diabetes were recorded. Obviously then, the progressive increase in fatal tuberculosis among juvenile diabetics represents one of the natural hazards to which the diabetic is exposed by virtue of his lengthened life span. The person suffering from diabetes prior to 1922, when insulin was introduced, did not live long enough to add tuberculosis to his problems. To-

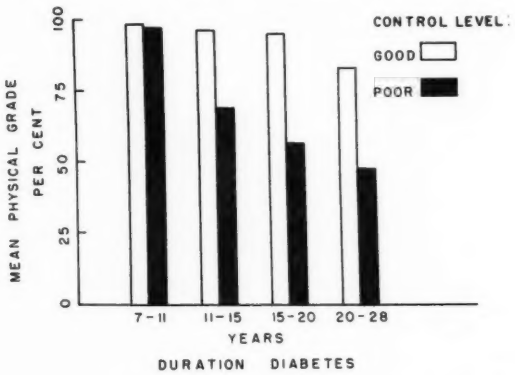

FIG. 3. Graph showing the relationship of the physical status of diabetic patients with good and poor control over a period of years. [Compiled from data in Daeschner, C. W.; Deisher, R. N.; and Hartmann, A. F.: Later Status of Juvenile Diabetics, J. Pediat. 38:8-17 (Jan.) 1951.]

day the alert physician through regular skin-testing each six months and chest roentgenograms can eliminate this cause of death. It is my belief that the tuberculin positive juvenile diabetic should have a chest roentgenogram every three months.

A third complication of the first five year period which is all too common is that of diabetic acidosis. In spite of the fact that therapy in diabetic coma has been studied widely and the basic need for insulin, fluid, and electrolytes emphasized repeatedly, the mortality rates from severe diabetic acidosis remain too high. Although it is not within the scope of the present report to discuss the therapy of coma, perhaps it is pertinent to call to mind that adequate treatment of the diabetic patient in coma constitutes another way in which mortality rates may be reduced. Acidosis is usually the result of poor regulation or of severe intercurrent infection. Consequently optimum therapy involves its prevention through the maintenance of good control of the diabetes plus antibiotic agents when indicated to check infection. The systematic daily examination of the urine for sugar and acetone bodies will insure early detection of ketosis and enable the physician to abort impending acidosis.

After Five Years

In the second five-year period of the patient's diabetic life, detectable vascular disease is of very low incidence. In some quarters this observation has led to

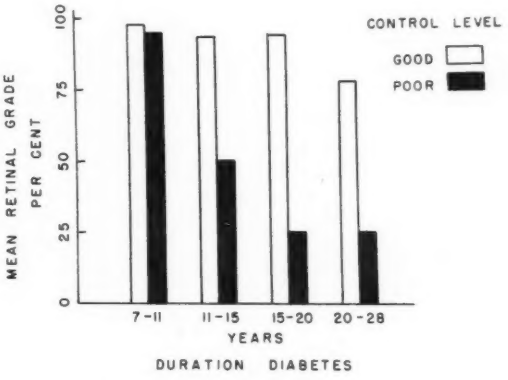

FIG. 4. The relationship of retinal disease in diabetic patients with good and poor control over a period of years. [Compiled from data in Daeschner, C. W.; Deisher, R. N.; and Hartmann, A. F.: Later Status of Juvenile Diabetics, J. Pediat. 38:8-17 (Jan.) 1951.]

the assumption that good control is not necessary, that the presence or absence of vascular disease is an individual quality, unrelated to the level of the patient's antecedent care.[12, 16] It is well known that frequently evidence of good or of poor control cannot be determined by physical examination after seven to ten years of diabetic life.[4] If the same patients are followed for fifteen, twenty, or more years, however, the superior physical status of the well-regulated diabetic is clearly evident (fig. 3).

The vascular complications which beset the maturing juvenile diabetic appear to be largely of a degenerative type which may be likened to a "premature old age."* The vascular sclerosis which involves arteries, arterioles, veins, and capillaries[1] begins to appear after about ten years in poorly controlled patients, but in the well-regulated patient these changes may be absent after twenty or thirty years of diabetic life.[4, 7, 9, 10] Early evidence of vascular disease is suggested by increased capillary fragility as determined by any of the petechial index tests.

It is convenient to use a simple positive pressure method. An area the size of a silver quarter (approximately 1 in. in diameter) is outlined on the inner aspect of the forearm about a quarter diameter below the antecubital crease. Any skin blemishes are marked. The patient's blood pressure is determined, and a point midway between systolic and diastolic is selected. This midway pressure is then maintained for a period of ten minutes with the blood pressure cuff. Some twenty to thirty minutes later the number of

*This is pointedly emphasized by the all too common finding of a 21 year old diabetic with the vascular tree of a man of 70 years.

petechiae in the area are counted. Any number less than 10 is considered normal, while numbers above 25 are considered strongly suggestive of generalized vascular disease. Counts of 10 to 25 usually represent early vascular involvement but in rare instances may be considered normal. This is a simple procedure that may be accomplished in the physician's office.

Closely correlated with the onset of increased capillary fragility are the retinal changes. Characteristically these appear first as dilated veins, capillary microaneurysms, and small round hemorrhages, progressing to large, deep, and superficial retinal hemorrhages of the flame-shaped variety. As the disease becomes more severe, retinal arteriosclerosis appears; this may progress to retinitis proliferans with complete loss of vision. The striking correlation between good control and freedom from retinal disease has been emphasized repeatedly. Figure 4 is a graphic presentation of data recalculated from the literature.[4] Those whose control was considered good are contrasted with those whose control was considered poor. As mentioned previously, the mean retinal grades of the patients in the short duration group do not differ significantly; however, as the duration of diabetes increases, the superiority of good control is clearly evident.

Capillary fragility and retinal hemorrhages are the early evidence of generalized vascular disease. As the duration of diabetes reaches ten to fifteen years, the vigilant physician may begin to see in addition the presence of early hypertension, and urine examination may reveal intermittent albuminuria. These two findings herald the onset of renal vascular disease classified clinically as diabetic nephropathy,[20] or intercapillary glomerulosclerosis of Kimmelsteil and Wilson. The clinical picture in many respects is similar to the nephrotic stage of chronic glomerulonephritis. Root stated that renal disease "has become the most serious late complication of childhood diabetes." White reported that in her experience all diabetics "who have survived 15 years of diabetes and have then come to autopsy have shown this lesion." In striking contrast are the reports of groups of cooperative and well-regulated patients from the same clinic[10, 19] who after twenty-five or thirty years of good control are clinically free of renal disease. Two groups of investigators[6, 14] have produced glomerular tuft changes in hyperglycemic rats. These were typical of intercapillary glomerulosclerosis. Such observations constitute significant evidence in favor of maintaining normoglycemia in diabetic patients. The authors of these studies emphasized that it may not be the hyperglycemia per se which produces the glomerular tuft changes, but rather some associated, less well-defined metabolic defects. Nevertheless, such experimental observations are of clinical import since regulation of the blood glucose level is the clinician's only tool by which to avoid other metabolic problems such as hypercholesterolemia, ketosis, and acidosis. Thus, clinical data reported by a number of authors support the view that good control lessens the incidence of and delays the onset of progressive renal disease.

SUMMARY

Although there is no real proof that good control is essential, poor regulation of the diabetic patient results uniformly in early onset of degenerative vascular disease. The physician is obligated, therefore, to provide the best possible program of regulation for his diabetic patients. Such a program should include the avoidance of emotional factors, the prevention of progressive tuberculosis, the intelligent management of intercurrent acidosis, and the maintenance of blood sugar values as near the normal range as is consistent with a relatively normal and useful life for the patient.

The author wishes to express his appreciation to Dr. Florence M. Heys for helpful criticism in the preparation of this manuscript.

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ABSTRACT OF DISCUSSION

DR. BENJAMIN B. SHAVER, San Antonio: The problem of handling juvenile diabetics is a very real one requiring a great deal of understanding and continued observation. Dr. Daeschner has shown that many of the complications can be prevented. I would like to discuss the practical application of some of these preventive measures.

The question of strictly controlled diet is sometimes the trigger mechanism that causes the revolt in the adolescent period. Even though the diet is strictly controlled, if the physician will be sufficiently lenient in the constituents of the diet, he can make it more acceptable. Of course, in this day and age, no one will attempt to control diabetes in children by diet alone. Since insulin is planned anyway, no effort to restrict carbohydrates should be made. Not only the rebellion of the patient causes upsets in control; since there is much hormonal imbalance and adjustment at this time, great lability in response to insulin will be encountered. It is not uncommon, especially in an adolescent girl who may cooperate perfectly, to find extremes of control marked glycosuria alternating with near insulin shock. Speaking of insulin reactions, one must realize that repeated severe insulin shocks have been shown by electroencephalogram to cause definite cerebral damage. So a tight rope must be walked, especially at this time.

The pathologic vascular changes are certainly the most serious complications feared in the maturing juvenile diabetic. As Dr. Daeschner has stated, the hyperglycemia per se may not be the specific cause of the glomerular tuft changes. This fact has led some pediatricians to follow a more expedient route in handling these children, thinking that restrictions of diet will be impossible. However, if there is no yardstick, then not only will the diet be unrestricted but insulin dosage and check-ups will be ignored and forgotten.

The diabetic camps that are now well distributed throughout the country are a great help to these children, giving them a feeling of being the same as other children.

With careful and understanding observation many of the hazards of diabetic control can be circumvented and these children can live a normal, healthy life.

FLUORIDATION OF PUBLIC WATER SUPPLIES

A Commentary

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FLUORINE and its use in the prevention of dental caries has become subject to acrimonious debate during recent years. This problem has arisen because of the advocacy of the addition of this element to the public water supplies by the United States Public Health Service and various state health departments. The policy has been established by the public health agencies that the addition of fluorine must have the approval of the local medical society. It would appear that in judgments of this sort, medical societies in the various communities should be well grounded in the facts and should make recommendations only after impartial review of all evidence.

The "Hearings" before the House Select Committee to Investigate the Use of Chemicals in Food and Cosmetics, House of Representatives, Eighty-Second Congress, Second Session, February 13, 19, 21, 26, 28, and March 4, 6, 1952, provides varied testimony regarding this subject and should be considered by physicians in making a judgment.

BASIC FACTS

The literature dealing with fluorine, its effects and uses is extensive, and it is for purposes of brevity that certain basic statements are offered where the evidence seems clear:

1. Fluorine, an element of the halogen group, is found naturally in soil, vegetation, and particularly subsurface waters in many parts of the world and in varying concentrations.

2. In those communities where fluorine occurs in concentrations of 0.5 to 1.5 parts per million in the water supplies, the teeth of those ingesting the water show less evidence of decay than in communities where it is absent. The incidence of reduction of caries is as much as from 35 to 65 per cent.

3. Fluorine in a concentration exceeding 1.5 parts per million results in mottling and staining of the teeth, and possibly in very high concentrations, in an increased susceptibility to decay in those persons who have ingested the substance during the period for development of teeth.

4. Reduction of the incidence of caries in growing children has been achieved by the addition of fluorine to public water supplies in communities where it was naturally absent or in very low concentrations. Fluorine is added at a rate to produce a concentration of approximately 1 part per million in the treated waters.

5. The technical features of addition of fluorine to public water supplies are well within the capabilities of trained water works operators.

6. Fluoride generally is added to the water in the

form of sodium fluoride, since this is one of the more soluble forms or combinations of the element.

7. No claim has been made that fluorine is the only factor involved in decay. There is no claim that dental caries is completely prevented; the incidence is decreased. It is not clear that persons whose teeth have completed their development will be benefited.

8. The mechanism of action is not clearly established beyond the fact that fluorine is combined with the enamel structures to form a tooth that resists decay. Powdered enamel does seem to have an affinity for fluoride.

9. Credit must be given to members of the United States Public Health Service who in cooperation with many others have performed the investigative work which confirms a relationship between the amount of fluorine in water and the incidence of caries.

CONTROVERSIAL POINTS

A number of groups have issued statements regarding the use of fluorine, and note was made of these in the "Hearings" referred to previously. For example, the American Dental Association and the Association of State and Territorial Dental Health Directors recommended fluoridation of water for partial control of caries where the local medical and dental professions approved. The American Public Health Association recommended the procedure as safe and effective for reducing the prevalence of dental caries. The American Water Works Association confirmed the ability of water works operators to fluoridate the water. The American Medical Association's Council on Pharmacy and Chemistry and Council on Food and Nutrition issued a statement indicating that evidence of 1 part per million of fluorine in the drinking water leading to structural changes of bones or increase in fractures had not come to their attention. Reference was made to apparent possible increase in mottled enamel with no evidence of toxicity reported, and the belief was expressed that the use of fluorine in concentrations up to 1 part per million was safe although less may be required in warm temperatures. The National Research Council likewise recommended the use of this material.

On the negative side of the question, the New Jersey State Board of Health urged neither promotion nor discouragement of communities with regard to fluoridation of water. While conceding with reservation that fluorine is a deterrent to dental caries, it was asserted, "its use as a mass medication had far-reaching physiological implications and would establish the precedent for the future treatment of water supplies as a cure-all for other deficiencies." The process was termed costly and inefficient with 99.5 per cent of the chemical and treatment wasted in baths, lawn sprinkling, and other such actions. The board suggested the investigation of alternative methods of supplying the material to persons.

Again, for purposes of brevity, since there was much overlapping of testimony by those who appeared before this committee, persons who testified before the committee are listed here. Those who were unable to endorse the program unqualifiedly or opposed it were as follows:

Robert H. Harris, Ph. D., Nutritional Biochemistry Laboratory, Department of Food and Technology, Massachusetts Institute of Technology.

Alfred Taylor, Ph. D., Biochemical Institute, University of Texas.

J. R. Blayney, D.D.S., Professor of Dental Surgery and Director of Walter G. Zoller Memorial Dental Clinic, University of Chicago.

E. B. Hart, Sc. B., Professor of Biochemistry, University of Wisconsin.

Veikko Oscar Hurme, D.D.S., Director of Clinical Research, Forsythe Dental Infirmary for Children.

H. H. Newman, M. D., Columbia University Research Assistant, Department of Dental Research.

Margaret Cammack Smith, Ph. D., Former Head, Department of Human Nutrition, University of Arizona.

Howard V. Smith, Associate Agricultural Chemist, University of Arizona.

On the affirmative side in the debate were the following:

Bruce D. Forsyth, D.D.S., Assistant Surgeon General, Chief Dental Officer, Public Health Service, Federal Security Administration.

John W. Knutson, D.D.S., Division Dental Public, Public Health Service.

Francis A. Arnold, D.D.S., National Institute of Health.

H. Trendley Dean, D.D.S., National Institute of Health.

H. B. Andervont, Ph. D., Chief of Laboratory of Biology, National Cancer Institute.

Isadore Zitkin, Ph. D., National Institute of Health.

J. Roy Doty, Ph. D., Secretary, American Dental Association, Council on Dental Therapeutics.

Bernard J. Conway, Assistant Secretary, American Dental Association, Council on Legislation.

John D. Porterfield, M. D., Secretary-Treasurer, Association of State and Territorial Health Officers.

Francis F. Heyroth, M. D., Ph. D., Associate Professor of Biological Chemistry, College of Medicine, University of Cincinnati.

David B. Ast, D.D.S., representing the American Public Health Association.

Safety

The first objection submitted by those who opposed the use of fluorine for mass application was that the standards for safety had not been met. Reference was made to the United States Food and Drug Administrations Standards for testing chemical additives to foods which provide for feeding the proposed substance for the entire life span of suitable experimental animals, at a level twenty-five to thirty times the expected human exposure, with determination of the effects on growth, food utilization, organ weights, re-

production, and biochemical functions together with histopathologic results. Those who opposed mass fluoridation thought that this type of study has not been provided. The importance of the safety factor was emphasized by the statement that "every human body is to be treated with the chemical—the young, the middle aged and the old, the sick and the well, those with teeth and those without teeth, those who believe in the medication and those who do not." Those who opposed it considered it mass medication without parallel.

It was pointed out that the information is not adequate to draw a frequency curve for fluorine tolerance to cover individual variations. Particular emphasis was placed on the need to study the effects of fluorine ingestion on old people with arteriosclerosis or hypertension, on those with impaired kidneys or diabetes. It was pointed out repeatedly that the facts which have been established so far have been limited to show the effect of the medicament on the teeth of children. No evidence was presented to show that there had been studies of variation in susceptibility of individuals to the ill effects of the chemicals, nor had there been any study to determine if there was illness that predisposes human beings to the toxic effect of fluorine. These criticisms were in part confirmed by the descriptions of the type of studies being carried on.

Methods of Use

The second group of criticisms dealt with the form in which fluorides are used. It was pointed out that fluoridation is not analogous to chlorination. Chlorine is put in as a gas to purify water and is largely dissipated as water is drawn for use. Fluorine, however, is put into water as a fluoride which remains for the purpose of affecting a body tissue. The question raised was whether or not the fluoride as added to water is fully comparable to the form of fluorine in naturally fluoridated waters. It has not been possible to determine just what the combinations of fluoride may be in natural waters. It might be in the form which would not produce the equivalent biologic effects. It was stated "since very little is known about fluorine in various organic combinations in contrast to more extensive information about inorganic fluorides, it appears presumptuous today to claim that inorganic fluorine added to drinking water is the precise equivalent to similar concentrations of naturally occurring fluorine compounds in water and food." It seems that there is a definite difficulty in determining the exact form in which fluoride is carried in suspension or solution in natural water supplies.

Systemic Effects

Several of those who discussed the opposition side of this question brought up questions of variable results that had been obtained in the studies which had been made and the variable reaction which plants show with regard to fluorine in the environment. Those presenting the public health side of the picture point to mottling of the enamel in mild degree as a warning sign which can be safely used in determining the hazards of the program. Those of the opposition expressed doubt regarding the use of mottled enamel as a criteria for harmful effects since, for example, the femur contains fifteen times as much fluorine as the tooth, gram for gram. Subjects ingesting fluorinated water are said to show low bacterial counts in the mouth. Those who are opposed to the program suggest that this means that the enzyme systems of bacteria are affected and that there is the distinct possibility that the enzyme systems of men may be similarly affected. It was asserted that fluorine is reactive in certain enzyme systems producing general reactions evidenced in soft tissues as well as teeth and bones. There is definitely storage of fluorine in animals, and in the bones of experimental animals, levels fifteen to twenty times that of the normal controls was noted. It was hypothecated that so long as the bones can store fluorine, the soft tissue is protected, but if that point is overreached, disaster may occur.

In Hart's studies with experimental animals, necrotic changes in the kidneys sometimes were found, and excessive doses of the drug produced soft teeth and increase in bony deposits about joints. In the feeding of animals, the level of safety in cattle was reported as 1 to 2 mg. of fluorine per kilogram of body weight per day, swine 5 mg., rats 10 mg., guinea pigs 12 mg., and chickens 40 mg. One part of fluorine per million of water would provide about .1 mg. per day for a child of 22 pounds if he ingested a quart of water. While conceding that this is well below the safety level as shown in cattle, it was pointed out that what was considered a low level in dairy cattle had bad effects over long periods of time.

The argument was presented that since fluorine finds its way into the body fluids and 90 per cent of the body is water, there is no basis for the idea that fluorides can have no influence on tissues other than bones and teeth. The gray matter of the brain is 85 per cent water and presumably would be thereby affected. Nerve function depends in part on the action of calcium, and fluorine bears a relationship to the utilization of calcium.

It was stated that studies have shown fluorosis to develop from water containing only .9 part per million and that in 1 part per million in communities in Arizona, 10 to 12 per cent of the inhabitants will have mild dental fluorosis. Attention was directed to U. S. Public Health Service reports of studies in the midwest, particularly in seven cities with naturally occurring fluorine levels of 1.0 to 1.5 parts per million. The dental fluorosis in these cities was recorded

as ranging from 12 to 48 per cent. The U. S. Public Health Service representatives were able to refute this in part by referring to changes in water supplies over periods of years. Smith further stated that in some cities of the South and Southwest, mild fluorosis has been shown with 0.5 to 0.7 parts of fluorine per million of water. Wide differences in the fluoride content of teeth of people using the same water supplies were mentioned. The use of fluorine tooth powders and mouth washes and of fluorine sprays on vegetables presents another hazard to this whole problem.

Wide variation exists in uptake of fluorine by plants, apparently depending upon acidity of the soil. Little fluorine is taken up by plants growing in calcarious soil, but buckwheat grown in soils containing 100 to 360 parts of fluorine per million contained 1,170 to 1,280 parts per million. In Maryland, where there were 102 parts per million in the soil, buckwheat and collards took up to 9,900 parts of fluorine per million. The point was made by others and conceded by the Public Health Service that variations in water consumption of human beings depending upon season and mean temperature must be considered in setting the level for fluorine in water, so that in the summer periods or in the hot areas of the country the percentage of fluoride to be added to the water would be less than that in the more northerly parts of the country. The question also was raised as to whether variations in age and occupation are sufficient to produce hazards in individuals.

Reference was made during the testimony to the work which showed that the blood fluoride content varies with the fluoride content of water and that there is a variation of the fluoride content of placentas, but that in both fluoride water communities and nonfluoride water communities there is more fluoride in the placenta than in the water or in blood. The interpretation of this finding depends on whether there is actual need for fluorine and the placenta is used to concentrate this substance to make it available for the developing fetus or whether it truly is a toxic material and the placenta serves as a barrier to protect the fetus.

Dental Caries

As has been indicated previously the exact place of fluorine in dental caries is as yet undetermined. The fluorine content of a tooth apparently depends primarily upon the quantity of fluoride taken into the body during the period of tooth development. This means that fluoridation of a public water supply will require that large numbers of persons past that age will be required to consume this substance which has never been shown to be an essential element of human nutrition. The absence of fluorine from a diet fully adequate in all nutrients except this trace element has not been shown to cause caries; therefore, fluoride cannot be considered the sole factor, particularly since caries can be produced by several procedures and can be prevented by other chemical agents.

The study of Harris on hamsters was of interest since he used for his diet in a series of matched experiments, milk from a Texas fluoride area, corn from a Texas fluoride area, milk from a New England nonfluoride area, and corn from a New England nonfluoride area. Harris reported that when hamsters were fed the Texas milk and Texas corn, 40 per cent less caries was noted than in the hamsters fed New England corn and New England milk; however, when combinations of Texas milk with New England corn and Texas corn with New England milk were fed, there were no changes in the incidence of caries noted nor did they differ from the group fed simply New England milk and New England corn. It was suggested that there is something in the New England diet that causes decay rather than that the Texas food prevents decay, and actual fluorine analysis of the two groups of foods showed relatively little difference in fluorine content. The New England foods were from three to five times as high in manganese, magnesium, and copper as Texas foods. Manganese and magnesium have been suggested as possible cariogenic agents. Harris stated that riboflavin is about as effective as fluorine in preventing caries in the hamster. The reasoning which was behind the program for fluorination of water was defective in that it had proceeded more or less as follows: Texas people have less dental decay than New England people; fluorine is effective in preventing dental decay; therefore, the difference in Texas people and New England people is difference in fluorine. While conceding that part of the answer may exist in such reasoning, Harris considered that it is important to bear in mind the possible variations in content of food and the form in which fluorine may occur in foods. The question was raised without any definite answer as to whether or not periodontal disease may be increased by the administration of fluorine particularly since periodontal disease is possibly as prevalent as dental caries.

Reports of studies in dogs showed no ill effects over a period of two or three generations from 5 parts of fluorine per million in their diet. Information on fluorine content of foods revealed variations from 0.14 to 11.2 parts per million. One of the infant cereals contains 11.2 parts per million. Preliminary reports of the Evanston, Ill., dental caries study showed a reduction of 48 per cent in caries. The mass topical application studies showed 40 per cent reduction.

Relationship to Cancer

Taylor presented a report of treating drinking water of experimental mice with fluorine. The controls re-

ceived distilled water. This was a part of research on cancer in a strain of mice in which 95 per cent of the females die with mammary cancer. This work was initiated because of the findings (1) that sodium fluoride in low concentrations inhibits tissue glycolysis, (2) that tumor tissues are more sensitive than normal tissues to glycolysis, and (3) that respiration of tumor tissue is increased by sodium fluoride whereas normal tissue is little affected. Taylor's statement clearly indicated that while there was no increase in the incidence of cancer, the mice given fluorinated water developed lesions earlier and as a result had a shortened life expectancy. This work of Taylor was particularly attacked by the United States Public Health Service workers, who seemed to refuse to accept the actual statement as given and referred to increased mortality from cancer, which Taylor did not describe.

Forsythe in presenting a table on cancer morbidity and mortality said, "These three reports relate specifically to the false claims that the ingestion of fluorine may increase the incidence of cancer." It was efforts such as this which cast doubt on the creditability of the Public Health Service speakers since the comparison was made of Nacogdoches, Tyler, Abilene, and Stephenville, Texas (total population 105,334), towns having no fluorine in the water supplies, with Lamesa, Lubbock, Plainview, and Amarillo (total population 163,382), where fluoride is found. In the first group of communities the comparison was a cancer mortality of 88.3 per thousand compared with 86.3 in the communities referred to in 1948 and of 94.9 compared with 75.9 per thousand in 1949. This would seem to show that there is actually lower mortality in the fluoride areas; however, one must bear in mind the fallacy of statistics. The rapid growth of these communities in Texas makes the figures fallacious. If the ingestion of fluorine over a period of possibly forty years, which is the age of beginning cancer expectancy, is necessary for results to be verified, then these statistics can have little value because of the 163,382 listed as living in Amarillo, Plainview, Lubbock, and Lamesa, only 14,710 resided in those communities in 1910. In other words, as a statistical group, 148,658 had been added to the group since 1910 and 87,368 had resided in the communities less than twenty years. Only 1 in 10 could possibly have lived over the forty year period in this area where fluoride is present. In the nonfluoride communities it would be possible that 1 in every 4 could have lived at the time forty years prior to the listing of the mortality statistics.

A similar presentation was the cancer morbidity of Denver, which has 1 part of fluorine per million of water and San Francisco, which has .1 part per million. There is no explanation offered as to why two different years were compared, for example Denver in 1939 as against San Francisco in 1938. Likewise, no explanation is made as to the source of the statistics, and no appraisal of the effectiveness of the local programs for recognition of the disease exists.

Andervont testified that he checked Taylor's work and found the diet of the mice to contain 30 to 40 parts of fluorine per million though no mention is made of the fact that this is the standard diet used both in controls and in the experimental mice. He admitted that the United States Public Health Service has attempted no experiments to validate or refute the findings as presented.

Fluorine Intoxication

The paucity of information regarding the signs of fluorine intoxication was reiterated by various speakers. The most complete study of fluoride intoxication apparently is that among cryolite miners, who inhale the dust in an estimated quantity of from 25 to 30 mg. daily. Of these miners 81 per cent displayed the symptoms of a transitory character of nausea, vomiting, and loss of appetite; 34 per cent suffered chronic constipation or diarrhea; 52 per cent complained of shortness of breath, cough, palpitation, or expectoration; 35 per cent complained of stiffness and rheumatic pains. Headache, giddiness, and sleepiness were variably reported. Thus from the pure symptomatology it would be difficult to arrive at a diagnosis of fluoride intoxication without the history of ingestion of the material. The autopsy findings on these miners revealed increased thickness in density of the bone in approximately 84 per cent limited motility of the spine in 50 per cent, and emphysema and reduced motility of the thorax. There were no changes in blood pressure, hemoglobin, red blood cell count, white blood cell count, bleeding or coagulation time, urine, skin, nervous system, or endocrine glands.

SUMMARY

To one trying to read objectively the report of the Congressional hearing on fluoridation of public water supplies, it appears that the representatives of the public health field have developed considerable enthusiasm for a method of caries control which is relatively simple and for which, considering the benefits to be obtained in the reduction of dental caries of from 35 to 65 per cent, the cost is not excessive. Estimates which were presented showed the cost to be somewhere in the neighborhood of 11 cents per person per year. There can be little question that the work which has been done so far has been directed largely toward proving the effectiveness of the method in the control of caries and that the efforts which have been made to determine the ill effects of this material have been restricted to small groups of chil-

dren and to a test group of some 5 or 6 adults where studies on the urine were made. In presenting their case, the public health officials repeatedly expressed that in their own thinking there was no possibility that harm could occur. Undoubtedly bias existed in the presentation from both sides of the question. The counsel for the committee as well as members of the committee were pointed in comment at times. The opposition group in its questioning of the methods used raised several interesting questions which should be answered. Whether or not the hazards of the use of sodium fluoride are sufficiently great that the program should be deferred until the experimental work can be completed is the question that individual communities and individual groups of physicians will be called upon to decide.

It is conceded that the use of this material in water will produce a certain percentage of cases of mild fluorosis. One group in its enthusiasm considered these changes negligible and of no importance. The other group pointed to them as definite reasons for not carrying on the program. The committee which held these hearings was not, in its final report, willing to endorse the fluoridation of water. Apparently sufficient doubts were expressed that it seemed desirable to perform further experimental work before universal endorsement is given.

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Psychosomatic Medicine As It Affects the Family Doctor

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THERE has long been a feeling among physicians that a patient is either physically ill or mentally ill, and if the illness is physical, it should be the prime consideration of the physician. In a like manner, if no evidence of physical illness is seen, then the patient is a "neurotic" or mentally ill person and should be delegated to the psychiatrist.

Often a patient does have a physical illness which we can treat, but physical illness is not always the reason he is sick. Sometimes we are blinded by the presence of some physical disease and after directing all our efforts toward its treatment, even to the point of completely curing that disease, we find that the patient is still ill. Maybe he has the same symptoms or perhaps another set of symptoms; nevertheless, he is still sick! Although we may tell him he is recovered, this reassurance does not affect his feelings. If the patient is a woman between 30 and 50 years of age, we write it off as "change of life." If it is a man, he is "maladjusted" or has an "inferiority complex." If the patient is past 50, he is just getting "senile," and if he is between 10 and 20, he is "adolescent."

It has long been my opinion that no patient presents himself to the physician for an organic disease alone. Every individual illness is different from every other illness, just as every person differs from every other person. In addition to being an animal organism, man is equipped with physical capacities and mental powers that make him unique in the world of living creatures.

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According to the present concept of psychologists it is said, "Perhaps the most important forces determining man are his emotions. Surging up from his subconscious mind, they influence his experiences and actions, both directly and indirectly. Of course, the power to think and the ability to make decisions are extremely important in the course of his life, but it is still true that man lives in his emotions even more than in his thoughts and volitions."[3]

The term "psychosomatic medicine" has been used in recent years in many medical papers and with a variety of meanings; however, it is generally agreed that it means the constant connection of the "psyche" or mind with the "soma" or body. It does not always mean that the illness is caused by a condition of the mind, but may also mean that the condition of the mind can be caused by the illness.

The emotions have both good and bad influences on health and body functions. When a patient is ill and his emotions are functioning in harmony, the illness is less disagreeable and is much easier to treat. We have all had experiences in which patient responded well to medication, almost regardless of what the medication contained. Conversely, we have seen patients who do not seem seriously ill but who do not seem to improve, no matter what medicine is prescribed. Evidence of emotional influence is most often observed in surgery when the patient undergoes an extensive and serious operation but seems to rebound to health at an astonishing rate. Is it because we are such good surgeons? No, it is because the patient realizes that something that has been hurting him

or his health has been removed mechanically and visibly, and he should feel better, so he does.

We have all heard of physicians who made a mistake in diagnosis and removed a normal appendix from a patient who had complained of digestive symptoms. Strangely, the patient was completely relieved by the removal of a normal organ. That is, he was relieved until some other emotional conflict entered his life; then the gastric disturbance returned. Laboratory work, gastrointestinal series, gallbladder studies, and liver function tests are begun. Something which could be causing his trouble should be and usually is found.

We all remember the patient who came in the office using a cane or crutches; all his teeth had been removed; his appendix, gallbladder, hemorrhoids, corns, and bunions had been removed; but he still had his tonsils! They were not acutely inflamed, but they were deeply embedded and the patient wanted them removed. Thirty minutes later he had his desire —and left his cane in the office, walked unassisted down the stairs, cured of his rheumatism. Later we received a call from his wife saying he was free of rheumatism, but now he had amnesia. She wanted help to get him into a Veterans Administration Hospital for treatment. The patient was found to have a positive spinal fluid Wasserman reaction with an Army record of positive blood serology twenty years ago.

The point I wish to make is that no patient has a classical form of illness. The disease may be typical, the diagnosis of the disease may be correct, but the diagnosis is not complete until the personality problems are understood and the treatment cannot be effective until the fears and resistance of the patient are evaluated. It is not necessary that every family doctor be a psychiatrist, nor is it necessary for psychosomatic symptoms to be treated by special psychosomatic physicians, but is urgent for the family doctor to recognize that there is a personal factor in every patient he sees. He can learn more about his patient's illness by allowing time for the patient to talk than by making many laboratory tests. One of the difficulties lies in the fact that, "Personality is not exclusively a medical term. It is also a philosophical and religious term. Neither the scar in surgery nor the reintegration of the person in psychosomatic therapy can be accomplished without the vegetative sensitive and intellectual vitality of the soul."[5]

In ancient literature Plato wrote, "As you ought not to attempt to cure the eyes without the head, or the head without the body, so neither ought you attempt to cure the body without the soul . . . and, therefore, if head and body are to be well, you must begin by curing the soul; that is the first thing."

Some of the effects of the emotions on the function of various organs are mentioned by Barry in his statement, "In psychosomatic medicine we take cognizance of the relationship of the emotions to functions of the various organs and attempt to arrive at an understanding of disease which is based on organic changes, on altered physiology and on emotional disturbances, past or present."[2] Every patient who enters our office has both a mind and a body.

The opinion of the psychiatrist is that, "It is extremely urgent that psychosomatic illness be checked at the earliest possible moment, and this is the responsibility of the physician who sees the patient first. At the initial appearance of the illness the causative factors are close to the surface and are readily uncovered.[6] This same author states, "Inadequate care for psychogenic pathological conditions is responsible for many, if not most, of the failures in medical practice and fosters the development of chronic neuroses and protracted invalidism. It is also responsible for the flourishing of many healing cults."

What is it that brings the patient to his doctor? In only one-third of the cases is it a physical complaint alone. The other two-thirds of patients come because they are not satisfied with the way they feel or act, but they don't know what is wrong. They come because they have faith in their physician and usually believe that he has some miracle power to be able to understand what is wrong and how to correct it. They do not want to be told that there is nothing wrong with them, even if that is true. They want the doctor to find something that is causing them to feel or act the way they do.

I received a call one evening recently from a frantic mother wanting me to come quickly and give her 14 year old son some sort of injection to make him go to sleep. Her anxiety and the nature of the request prompted me to ask if the boy's father was at home and if I could speak to him in order to understand the situation better. She shouted that he could not come to the phone because he was sitting on the teenager in the dining room. The question in my mind was where to begin the treatment; certainly it was not on the boy.

Now, if we shrug our shoulders and say that this is no problem of ours, we will be doing ourselves, as well as our patients, an injustice. That mother did not know how to cope with the situation and she wanted help. She would not go to a psychiatrist because she didn't think it was necessary to bring a strange physician into the situation. If we turn down such an opportunity to help, those patients will seek someone else who might not belong to the regular school of practice. If he listens and offers sympathy and understanding, he will have served their need and he will have patients that we have lost. We must

listen to the patients, try to understand their problems, and offer them some method of relief.

The psychosomatic problem is often seen in children, but many times it is overlooked because the physician sees only an unruly child who must have his throat examined and must be given an injection. Barhash[1] states that "many emotional problems in adult life arise from the psychic trauma received as a child at the hands of a physician who neglected to explain the details of a tonsillectomy and anesthetic."

We must remember that these small youngsters also have a mind as well as a body, and the impressions they receive are not always the impressions we intended to impart to them. Physicians in general practice, as well as those in pediatrics, should remember that few mothers will force their children to go to a physician whom the children dislike. We may lose adult patients because of the distrust we create in the minds of their children.

The family doctor is often requested by a well meaning mother or wife to give a husband something to make him stop drinking or a son something to make him lose weight. If the doctor discourages that mother or wife by telling her that nothing can be done or that the patient can stop his drinking or eating habit if he desires, the physician loses an opportunity to secure a lifelong friend. Instead he should suggest to that mother or wife that they discuss the problem. In this way the physician can soon know why that particular patient overindulges and at the same time, the mother or wife will feel like she has acquired a friend in her physician so that she can bring other problems to him, even if he has made no effort to solve this one. I think that every patient who tries to reduce his weight should be given some encouragement by the physician by asking him to follow a diet which the physician gives, to take prescribed medicine, and to return at regular intervals. If instead, the doctor tells the patient to watch his diet and return in two months, the patient will wait two months before he begins to watch his diet, and probably will be so discouraged that he will fail to come back.

We know that there is little we can do for a "cold in the head." Yet patients return year after year asking for something to stop the cold. Give these patients a few minutes to talk, tell them to rest, drink lots of water, prescribe some aspirin-Phenacetin-caffeine compound, and they begin to feel better before they leave the office. The cold is not cured, but the patient is in a better frame of mind to live with it until it is gone.

Dr. Karl Menninger has sought to describe this mind and body relationship by stating that, "The thoughts, feelings, behavior and social relationships of patients, as well as their tissues and their body fluids, follow the principle of continuous adaptive shifts and reciprocal balances. When any one of these elements is disturbed from within, or without, the recovery of balance is attempted through a readjustment of all the others. The provocative agent may be a bacteria or a bayonet, a cancer cell or a seduction, a starvation of calcium or a starvation of love. Whatever the upsetting influence, many elements cooperate to restore the balance . . . what we conventionally call "disease" is sometimes this provocative agent, sometimes it is the bayonet wound; it is sometimes the overaction of the systemic defense measures, and sometimes it is the consequences of mismanagement by relatives, friends, and even doctors."[4]

It is noted often that patients recognize that their problems are psychic rather than organic, but they do not know what to do about it. Instead of having "female trouble," they are "troubled females" and they often use some trivial symptom to gain an audience with their physician, hoping that they can discuss their trouble with him. If we, as physicians, allow these patients to leave the office after an examination reveals little or no organic dysfunction, we are overlooking the reason they came to see us. How many times has a physician almost allowed a patient to leave when she says, "Doctor, there is something I've been worried about." Then, with little encouragement she tells the whole story of marital and sexual disappointment. Often the doctor is surprised at the lack of understanding many men and women have in regard to their life together, even after years of marriage and having a family. If the family physician has time to relieve patients of the phobias, restraint, and fear that have been building up in their minds for years, he will have done a greater service than removing a bad appendix.

Where does the fee come in? The physician certainly cannot expect to charge for that extra time. The payment is twofold: first, in knowing that he has rendered to the patient a service which is appreciated, and, second, by creating that priceless item, the doctor-patient respect and confidence. After a few months of giving this personal service, the physician finds many new patients being referred to him by those patients who have come to look upon the physician as their friend and family doctor.

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ABSTRACT OF DISCUSSION

DR. J. A. HALLMARK, Fort Worth: Anyone practicing medicine is constantly confronted with psychosomatic problems. Possibly some doctors reject that term and possibly a few are not even cognizant of it, but every real doctor is aware of the conditions about which Dr. Cole has spoken.

How often do we analyze the real reasons for our patients' complaints? It is usually true that if there exists a serious organic factor, such as cancer or tonsillitis, the statement that such is present is sufficient explanation, but do we know the cause of the symptomatology?

The family doctor has a tremendous advantage in suspecting what the offending situation is. Many times he has advance knowledge of home and family affairs that serve as trigger mechanisms. Therefore, he may get to the meat of the matter without endless hours of history taking and getting acquainted exercises. Naturally, this advantage is no substitute for thorough investigation. Isn't this fact and the great knowledge of handling people, the essence of the oft lamented "old family doctor"? He didn't call it psychosomatic medicine, but he surely knew its existence and its importance.

Too frequently after the physician recognizes that the basis of a patient's trouble is an unhappy home or some other difficulty, he is unable completely or even partially to rectify the problem. Yet how much money and how many operations can he save the unfortunate soul? Often in a case when the doctor feels that he has failed completely, the patient's relatives come in to thank him for assuring them that no horrible disease is hiding unseen, and that they need not feel obligated to keep up a constant and obviously endless search for a doctor or healer who has some magic power.

CASE REPORTS

DROOP SHOULDER FOLLOWING CERVICAL NODE BIOPSY

RALPH A. MUNSLOW, M.D., San Antonio, Texas, and
JOSEPH M. CAPPS, Capt. M.C., U.S.A.F., Fort Sam Houston, Texas

SINCE the end of World War II, 4 patients have been seen with the presenting complaint of a drooped shoulder. In fact, 5 instances of this disability have been observed; for 1 patient was bilaterally affected. The common factor in all cases was the onset of disability following biopsy of a cervical lymph node.

MATERIAL

The 3 men and 1 woman in this group had a cervical lymph gland removed for purposes of biopsy. In each instance, a small scar was present in the posterior triangle of the neck. These patients noted weakness about the shoulder postoperatively on the side of the biopsy, particularly when attempting to abduct the arm. Shortly thereafter, the shawl-like curvature of the shoulder was lost, the part assuming a squarer appearance (fig. 1). Examination revealed an inability to shrug the involved shoulder. Atrophy of the upper portion of the trapezius muscle was evident. In the patient with bilateral involvement (fig. 2), the sequence of biopsy and droop shoulder occurred first on the right side. When the biopsy material was deemed unsatisfactory, biopsy of a left posterior cervical gland again was followed by upper trapezius muscle paralysis and atrophy.

DISCUSSION

The superficial cervical lymph glands lie on or are embedded in the deep cervical fascia.[1] Some of these nodes, together with the deep cervical glands, lie grouped in close relation to the posterior border of

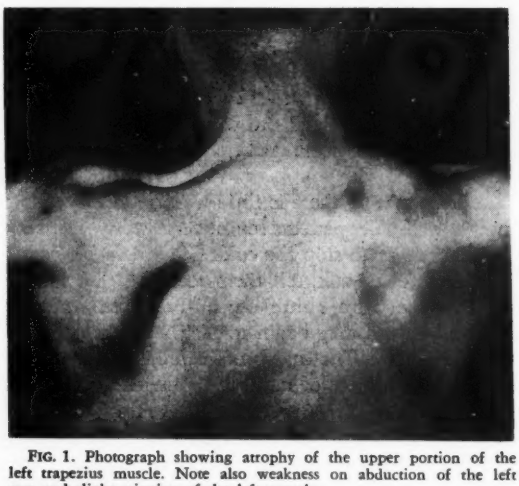

FIG. 1. Photograph showing atrophy of the upper portion of the left trapezius muscle. Note also weakness on abduction of the left arm and slight winging of the left scapula.

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In part from the Surgical Service, Brooke Army Hospital.

the sternocleidomastoid muscle in the posterior triangle of the neck. Within this triangle the spinal accessory nerve, after piercing and supplying the sternocleidomastoid muscle, appears at the posterior border of the muscle, proceeding obliquely downward to end under cover of the trapezius muscle, the upper portion of which it supplies (fig. 3). Lying, then, as it does without muscle cover and in close relation to the cervical lymph glands, the accessory nerve is vulnerable to operative trauma during removal of such a gland for biopsy. The symptoms described by these patients and the objective findings previously noted logically follow such trauma. Though the disability is not great as compared to injuries of other major peripheral nerves, it was believed that surgical restitution of the nerve offered little because of the profound muscle atrophy which already had occurred.

FIG. 2. Bilateral atrophy of the upper trapezius muscle.

During the past year, when approximately 450 peripheral nerve injuries were treated on the Neurosurgery Service at Brooke Army Hospital, only 1 example of spinal accessory nerve trauma was seen. This patient sustained a penetrating gunshot wound of the neck in the Korean fighting. It would appear that this nerve is more vulnerable to the scalpel than to enemy missiles. We would agree with Curtis,[2] Thorek,[3] and others who caution against such nerve injury in obtaining a cervical lymph gland for biopsy.

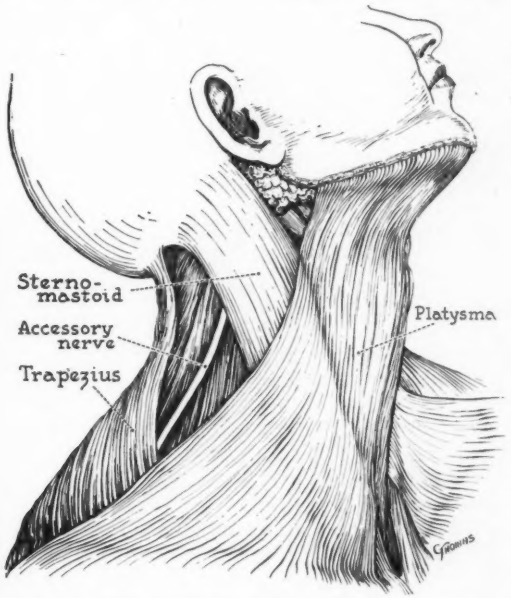

FIG. 3. Drawing showing the relationships of the accessory nerve in the posterior triangle of the neck.

SUMMARY

Five instances of upper trapezius muscle paralysis in 4 patients followed removal of a cervical lymph gland for biopsy. Attention is called to the vulnerability of the accessory nerve and the necessity of care in its avoidance during such an operative procedure.

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Dr. Munslow, 1233 Nix Professional Building.
Dr. Capps, Brooke Army Hospital.

BALLOON USED TO DIAGNOSE STOMACH CANCER

A new type balloon of thin latex rubber with a surface roughened by attaching fragments of foamed rubber with rubber cement has simplified diagnosis of cancer of the stomach, reports a physician writing in the August 16 issue of *The Journal of the American Medical Association.*

The deflated balloon is tied to the end of a rubber tubing and swallowed. The balloon is worked toward the pylorus before it is inflated; after inflation the balloon is drawn upward toward the stomach entrance where the air is released. This procedure is repeated three times. Peristalsis causes the abrasive surface to pick up specimens of cells from the mucous lining and the cells are then examined to determine malignancy.

The author reports that the technique takes about fifteen minutes and is adapted to quick office procedure.

American Surgeon Publication

Effective with the January, 1953 issue, the *American Surgeon,* which has been published in Atlanta, Ga., will be published by the Williams and Wilkins Company of Baltimore, Md., announce the Southeastern Surgical Congress and the Southwestern Surgical Congress, which sponsor the monthly journal.

FAMILIAL POLYPOSIS OF THE COLON

J. WADE HARRIS,* M.D., and E. B. HAY,† M.D., Houston, Texas

FAMILIAL polyposis of the colon is the hereditary occurrence of true polyps, or adenomas, in the colon and rectum. The polyps are frequently scattered from the anus to the cecum. They may be sessile or pedunculated and are of variable size. In 1947 Guptill collected 347 cases and added 5 cases of his own.[3] Since that time Rankin reported 10 cases,[9] Gardner 2 cases,[2] Johnson 1 case,[4] Strohl 3 cases,[10] and Jones 22 cases.[5] Familial polyposis should not be confused with pseudopolyposis of the colon secondary to inflammatory conditions, nor with the findings of 2 or more polyps in one of several segments of the colon.

A satisfactory classification of true adenomas of the colon and rectum has been suggested by Erdmann and Morris,[1] who divided them into two groups: (1) familial, multiple, or disseminated type papillomas that occur throughout the colon by the thousands and (2) adult or acquired type papillomas that may occur singly or in groups in the colon or rectum in either children or adults. These two types of polyps are true adenomas and consist of a stalk derived from the submucous fibrous tissue covered by an epithelial layer continuous with that of the bowel. There are always areas of normal mucosa between the adult type of polyps and usually small areas or normal mucosa are between the familial type of polyps (fig. 1 left), but occasionally the polyps in familial polyposis are so numerous that no normal mucosa can be found between them (fig. 1 right). Pseudopolyposis occurs as a result of some diffuse inflammatory disease, such as nonspecific ulcerative colitis or tuberculosis, and are not true adenomas but consist of islands of normal mucosa that lie between ulcers or areas of destroyed mucosa that contract as healing and scarring take place causing the areas of normal mucosa to be more prominent. The familial tendency in multiple polyposis has been pointed out by Lockhart-Mummery[7] and McKenney,[8] who demonstrated through three generations that the disease can be transmitted by both male and female and that it is inherited as a Mendelian dominant. Although polyps may appear at any time, there has been no report of the presence of polyposis at birth. LeFevre and Jacques[6] demonstrated multiple polyps in a 4 month old infant. McKenney observed polyps at various stages of growth in four children in the same family at the ages of 2, 5, 9, and 11 years respectively. The largest polyps were present in the oldest child.

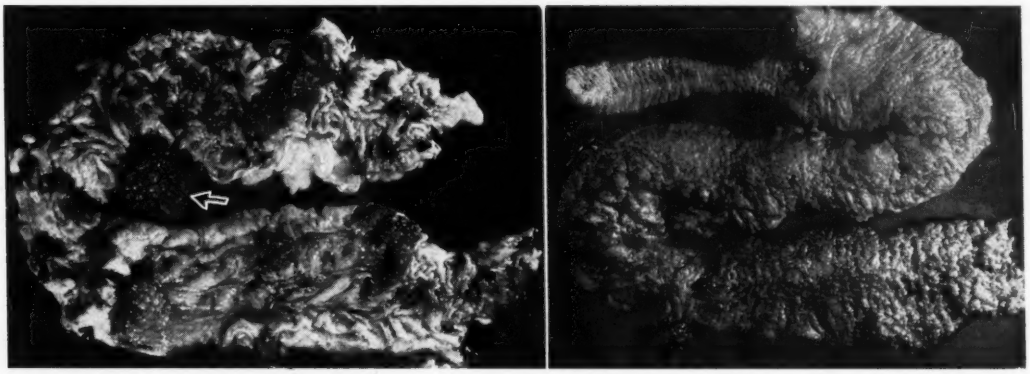

FIG. 1. Familial polyposis of the colon. Small areas of normal mucosa usually are found between the polyps (left; arrow points to large polyps), but occasionally the polyps are so numerous that no normal mucosa can be observed between them (right).

The danger of malignancy is present in all types of polyps of the colon but seems to be greatest in familial polyposis, it being widely accepted that some of the polyps will undergo malignancy if left untreated for a sufficient period of time. Because of this high incidence of malignant degeneration, surgical removal of the affected bowel should be the only accepted treatment. Probably the safest treatment is ileostomy and total removal of the large bowel including the rectum. However, because of the undesirability of an ileostomy, colectomy except for part of the sigmoid and rectum, and an ileosigmoidostomy is acceptable under certain conditions. Preservation of the anal sphincters is desirable and acceptable only if there is no carcinoma in the rectum or rectosigmoid, if the

Read before the Texas Society of Gastroenterologists and Proctologists, Galveston, April 30, 1951.

From the Department of Proctology, Baylor University College of Medicine.

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patient is cooperative, and if there are facilities for prolonged follow-up studies with fulguration of recurrent polyps. If these criteria cannot be met, total colectomy is the safest procedure. When there is no normal mucosa between the polyps complete fulguration is difficult or impossible and the time necessary for treatment discourages adequate observation. For these reasons a total colectomy, including the rectum, should always be done.

During the past few years we have encountered 5 cases of multiple polyposis (table 1). In 3 of these patients (cases 1, 2, and 3) there was a hereditary tendency (fig. 2). In one other (case 5) the cause of death in the grandparents was not known; the father is living and well; the mother died at 30 years of age of what was called "stomach cancer." There is one brother and one sister, both living and well; the sister has recently been subjected to proctoscopy and no polyps were found. The fifth patient (case 4), an orphan, does not know any of his family history and has no children.

It was our plan to treat these patients by fulguration of the tumors in the rectum and rectosigmoid, followed by an end to end ileosigmoidostomy, and colectomy except for the rectosigmoid and rectum, and fulguration of any recurrent polyps in the remaining colon. This had to be altered in case 1, because when the patient was first seen, acute intestinal

TABLE 1.—*Summary of Five Cases of Familial Polyposis.*

Case, Race, Sex, Age	History	Exam. Colon	Treatment	Results
1 WF 24 yr.	Nausea, vomiting, 3 wk. Bloody diarrhea, 8-10 stools day, 7 yr.	300-400 polyps evenly distributed throughout colon, 2 mm. to 2 cm. diameter. Normal mucosa between polyps. Carcinoma, splenic flexure, with obstruction.	Ileostomy & cecostomy (6-8-48). Transverse colostomy (7-10-48). Left colectomy (11-17-49). Rt. colectomy & ileosigmoidostomy (8-12-49). Closure ileosigmoidostomy (5-3-50).	Gained 15 lb. wt. 2 stools daily. Occ. polyp in rectum.
2 WF 26 yr.	Diarrhea, occ. blood, 5-8 stools day, 7 yr.	200-300 polyps throughout colon; 20 in rt. colon, 2 mm. to 3 cm. diameter. Normal mucosa between polyps.	Fulguration, rectal polyps. Ileosigmoidostomy (9-13-48). Left colectomy (11-19-48). Rt. colectomy (1-4-49).	2 stools daily. Occ. polyp in rectum.
3 WM 51 yr.	Diarrhea, occ. blood, 5-7 stools day, 5 yr.	400-500 polyps evenly distributed throughout colon, 4 mm. to 3 cm. diameter. Normal mucosa between polyps. Carcinoma of rectum.	Fulguration, rectal polyps. Abdominoperineal resection. CA, rectum (6-20-49). Fulguration, polyps, through colostomy.	1 stool daily. Occ. polyp in colon. Colectomy refused.
4 WM 27 yr.	Bloody diarrhea, 10-12 stools day, 15 mo. Loss 37 lb. wt.	100-200 polyps throughout entire colon, evenly distributed. Normal mucosa between polyps.	Fulguration, rectal polyps. Ileostomy (11-28-47). Left colectomy; sigmoid colostomy (1-22-48). Right colectomy, ileosigmoidostomy (3-20-48). Closure, ileosigmoidostomy (4-22-48).	Gained 23 lb. 2 stools daily. Occ. polyp in rectum.
5 WF 28 yr.	Diarrhea, 4-6 stools day, Occ. blood, 10 yr.	400-500 polyps in entire colon except cecum, 2 mm. to 4 cm. diameter. No normal mucosa between polyps. Adenocarcinoma of several small polyps, left colon.	Fulguration, rectal polyps. Ileosigmoidostomy (1-23-48). Sub-total colectomy (3-28-48).	Died fifth day, shock, lower nephron nephrosis.

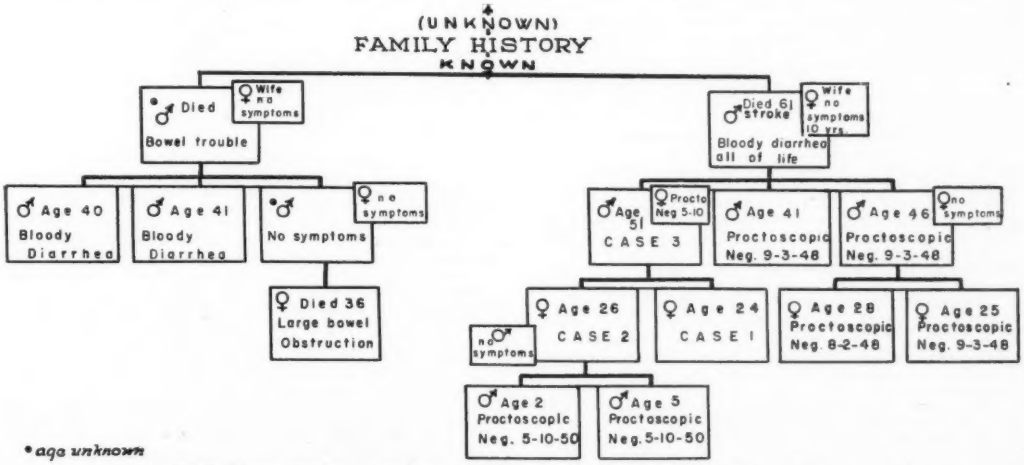

FIG. 2. Family history showing a hereditary tendency toward multiple polyposis. Three of the cases of polyposis of the colon reported in the text (cases 1, 2, and 3) are included in this family.

obstruction was present and a preliminary ileostomy and cecostomy were done. Carcinoma was found in one of the rectal polyps in case 3 and an abdominoperineal resection was done.

The patient in case 5 died the fifth day after surgery from shock and lower nephron nephrosis. The 4 surviving patients are living and well and are being studied by proctoscopic examination every three to six months to search for any new polyps that may develop. All the patients had symptoms of colon disease for some time prior to their consulting a physician.

SUMMARY

Five cases of multiple polyposis of the rectum are reported, with a brief summary of the symptoms, proctoscopic findings, incidence of carcinoma, type of operation, and present condition.

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NEWS

COMING MEETINGS AND CLINICS

Texas Medical Association, Houston, April 28-29, 1953. Dr. T. C. Terrell, Fort Worth, Pres.; Mr. N. C. Forrester, 700 Guadalupe St., Austin, Executive Secy.

American Medical Association, Denver, Dec. 2-5, 1952. Dr. Louis H. Bauer, Hempstead, N. Y., Pres.; Dr. George F. Lull, 535 North Dearborn St., Chicago 10, Secy.

NATIONAL AND REGIONAL

American Academy of Allergy. Dr. Walter S. Burrage, Milwaukee, Pres.; Mr. James O. Kelley, 208 E. Wisconsin Ave., Milwaukee 2, Executive Secy.

American Academy of Dermatology and Syphilology. Dr. Donald M. Pillsbury, Philadelphia, Pres.; Dr. John E. Rauschkolb, 25 Prospect Ave., N. W., Cleveland 15, Secy.

American Academy of General Practice, St. Louis, March 23-26, 1953. Dr. R. B. Robins, Camden, Ark., Pres.; Mr. Mac F. Cahal, 406 W. 34th St., Kansas City 2, Executive Secy.

American Academy of Obstetrics and Gynecology, Chicago, Dec. 15-17, 1952. Dr. Carl P. Huber, Indianapolis, Pres.; Dr. Ralph A. Reis, 116 S. Michigan Ave., Chicago 3, Secy.

American Academy of Ophthalmology and Otolaryngology, Chicago, Oct. 12-17, 1952. Dr. J. Milton Robb, Detroit, Pres.; Dr. W. L. Benedict, 100 First Ave. Bldg., Rochester, Minn., Secy.

American Academy of Pediatrics, Chicago, Oct. 20-23, 1952. Dr. W. W. Quillian, Miami 34, Pres.; Dr. E. H. Christopherson, 610 Church St., Evanston, Ill., Secy.

American Association for Thoracic Surgery, San Francisco, March 27-30, 1953. Dr. Robert M. Janes, Toronto, Canada, Pres.; Dr. Paul C. Samson, 2938 McClure St., Oakland 9, Calif., Secy.

American Association of Genito-Urinary Surgeons, Hot Springs, Va., May 6-8, 1953. Dr. A. J. Scholl, Los Angeles, Pres.; Dr. Norris J. Heckel, 122 S. Michigan Ave., Chicago 3, Secy.

American Association of Obstetricians, Gynecologists and Abdominal Surgeons. Dr. Leroy A. Calkins, Kansas City, Pres.; Dr. William F. Mengert, 2211 Oak Lawn Ave., Dallas, Secy.

American Cancer Society. Dr. Guy Aud, Louisville, Ky., Pres.; Mr. M. R. Runyon, 47 Beaver St., New York, Exec. Vice-Pres.

American College of Allergists. Dr. J. Warrick Thomas, Richmond, Va., Pres.; Dr. Fred W. Wittich, 423 La Salle Medical Bldg., Minneapolis 2, Secy.

American College of Chest Physicians, New York, May 28-31, 1953. Dr. Andrew L. Banyai, Milwaukee, Pres.; Mr. Murray Kornfield, 112 E. Chestnut St., Chicago 11, Exec. Secy.

American College of Physicians, Atlantic City, April 13-17, 1953. Dr. T. Grier Miller, Philadelphia, Pres.; Mr. E. R. Loveland, 4200 Pine St., Philadelphia 4, Secy.

American College of Radiology, Chicago, February, 1953. Dr. John S. Bouslog, Denver, Pres.; Mr. W. C. Stronach, 20 N. Wacker Drive, Chicago 6, Executive Secy.

American College of Surgeons. Dr. Alton Ochsner, New Orleans, Pres.; Dr. Michael L. Mason, 40 E. Erie St., Chicago 11, Secy.

American Congress of Physical Medicine. Dr. Robert L. Bennett, Warm Springs, Ga., Pres.; Dr. Frances Baker, 1 Tilton Ave., San Mateo, Calif., Secy.

American Dermatological Association, Lake Placid, N. Y., June 9-13, 1953. Dr. Earl D. Osborne, Buffalo, Pres.; Dr. L. A. Brunsting, 102 2nd Ave., S. W., Rochester, Minn., Secy.

American Gastro-Enterological Association, Atlantic City, May 1-2, 1953. Dr. Albert M. Snell, Palo Alto, Calif., Pres.; Dr. H. Marvin Pollard, 1313 E. Ann St., Ann Arbor, Mich., Secy.

American Gynecological Society. Dr. William P. Healy, New York, Pres.; Dr. John I. Brewer, 104 S. Michigan Ave., Chicago, Secy.

American Hospital Association. Dr. Anthony J. J. Rourke, San Francisco, Pres.; Mr. George P. Bugbee, 18 E. Division St., Chicago, Executive Secy.

American Laryngological, Rhinological, and Otological Society, New Orleans, April 28-30, 1953. Dr. Francis E. Le Jeune, New Orleans, Pres.; Dr. C. S. Nash, 277 Alexander St., Rochester 7, N. Y., Secy.

American Neurological Association, Atlantic City, June 15-17, 1953. Dr. Hans H. Reese, Madison, Wis., Pres.; Dr. H. Houston Merritt, 710 W. 168th St., New York 32, Secy.

American Ophthalmological Society, Hot Springs, Va., May 28-30, 1953. Dr. Conrad Berens, New York, Pres.; Dr. M. C. Wheeler, 30 W. 59th St., New York 19, Secy.

American Orthopedic Association. Dr. Fremont Chandler, Chicago, Pres.; Dr. C. Leslie Mitchell, Henry Ford Hospital, Detroit 2, Secy.

American Pediatric Society, Atlantic City, May 6-8, 1953. Dr. Irvine McQuarrie, Minneapolis, Pres.; Dr. Aims McGuinness, 237 Medical Laboratory, University of Pennsylvania, Philadelphia 46, Secy.

American Proctologic Society, Boston, June 10-13, 1953. Dr. Newton D. Smith, Rochester, Minn., Pres.; Dr. Stuart T. Ross, 131 Fulton Ave., Hempstead, N. Y., Secy.

American Psychiatric Association, Los Angeles, May 4-9, 1953. Dr. D. Ewen Cameron, Montreal, Canada, Pres.; Dr. R. Finley Gayle, 6300 Three Chopt Rd., Richmond 21, Va., Secy.

American Public Health Association, Cleveland, Oct. 20-24, 1952. Dr. Gaylord W. Anderson, Minneapolis, Pres.; Dr. R. W. Atwater, 1790 Broadway, New York 19, Exec. Secy.

American Society of Anesthesiologists, Philadelphia, Nov. 11-14, 1952. Dr. C. Walter Metz, Denver, Pres.; Dr. J. E. Remlinger, Jr., 188 W. Randolph St., Chicago, Secy.

American Society of Clinical Pathologists, Chicago, Oct. 13-18, 1952. Dr. Israel Davidsohn, Chicago, Pres.; Dr. Clyde G. Culbertson, Indiana University School of Medicine, Indianapolis, Secy.

American Surgical Association, Los Angeles, April 1-3, 1953. Dr. Robert S. Dinsmore, Cleveland, Pres.; Dr. Nathan Womack, Chapel Hill, N. C., Secy.

American Urological Association, St. Louis, May 11-14, 1953. Dr. George F. Cahill, New York, Pres.; Dr. C. H. DeT. Shivers, 121 S. Illinois Ave., Atlantic City, N. J., Secy.

Association of American Physicians and Surgeons, Denver, Oct. 2-4, 1952. Dr. Denton Kerr, Houston, Pres.; Mr. Harry E. Northam, 360 N. Michigan Ave., Chicago 1, Executive Secy.

International College of Surgeons, U. S. Chapter. Tri-State Assembly, Dallas, Feb. 6-7, 1953. Dr. H. W. Meyerding, Rochester, Minn., Pres.; Dr. Arnold S. Jackson, 1516 Lake Shore Drive, Chicago, Secy.

National Tuberculosis Association, Los Angeles, May 18-22, 1953. Dr. Sidney J. Shipman, San Francisco, Pres.; Mr. Kemp D. Battle, 1790 Broadway, New York 19, Secy.

Radiological Society of North America, Cincinnati, Dec. 7-12, 1952. Dr. Joseph C. Bell, Louisville, Ky., Pres.; Dr. D. S. Childs, 713 E. Genesee, Syracuse 2, N. Y., Secy.

Southern Medical Association, Miami, Nov. 10-13, 1952. Dr. R. J. Wilkinson, Huntington, W. Va., Pres.; Mr. C. P. Loranz, 1020 Empire Bldg., Birmingham 3, Ala., Secy.

Southern Psychiatric Association. Dr. R. Burke Suitt, Durham, N. C., Pres.; Dr. Newdigate M. Owensby, Medical Arts Bldg., Atlanta, Ga., Secy.

Southern Surgical Association, Hollywood, Fla., Dec. 9-11, 1952. Dr. I. Mims Gage, New Orleans, Pres.; Dr. John C. Burch, 2112 West End Ave., Nashville 5, Tenn., Secy.

Southwest Allergy Forum, Kansas City, Mo., 1953. Dr. Orval R. Withers, Kansas City, Mo., Pres.; Dr. James Holman, Medical Arts Bldg., Dallas, Secy.

Southwest Regional Cancer Conference. Secy., 209 Medical Arts Bldg., Fort Worth.

Southwestern Medical Association, Albuquerque, N. Mex., Oct. 30-Nov. 1, 1952. Dr. James Walsh, Douglas, Ariz., Pres.; Dr. W. W. Schuessler, 1415 First National Bank Bldg., El Paso, Secy.

Southwestern Surgical Congress, Dallas, Oct. 20-22, 1952. Dr. Michael E. DeBakey, Houston, Pres.; Dr. C. R. Rountree, 1227 Classen, Oklahoma City 3, Secy.

Tri-State Medical Assembly, Texarkana, Oct. 2-3, 1952, Dr. Frank G. Thibault, El Dorado, Ark., Pres.; Dr. Albert M. Hand, Le Bonheur Children's Hospital, Memphis 3, Tenn., Secy.

United States-Mexico Border Public Health Association, Ciudad Juarez, Chihuahua, Mexico, 1953. Dr. Salvador Molina Velez, Nuevo Leon, Mexico, Pres.; Dr. Sidney B. Clark, 314 U. S. Court House, El Paso, Secy.

STATE

Private Clinics and Hospitals Association of Texas, Austin, Oct. 25-26, 1952. Dr. Harvey Renger, Hallettsville, Pres.; Dr. Neil D. Buie, Marlin, Secy.

State Tumor Clinic, Wichita Falls, April 1, 1953. Dr. Bailey R. Collins, 925½ Scott Street, Wichita Falls, Director.

Texas Academy of General Practice, Dallas, Sept. 21-23, 1953. Dr. C. U. Callan, Rotan, Pres.: Dr. Woodson W. Harris, 1410 Nickerson, Austin, Secy.

Texas Academy of Internal Medicine, Dallas, Dec. 6-7, 1952. Dr. W. C. Dine, Amarillo, Pres.; Dr. John S. Chapman, 3810 Swiss Ave., Dallas, Secy. Meetings restricted to members.

Texas Air-Medics Association, Houston, April 27, 1953. Dr. Claire F. Miller, Waco, Pres.; Dr. J. S. Minnett, 2512 Welborn, Dallas, Secy.

Texas Association of Blood Banks, Galveston. Dec. 5-6, 1952. Dr. E. E. Muirhead, Dallas, Pres.; Miss Marjorie Saunders, 3500 Gaston Avenue, Dallas, Secy.

Texas Association of Obstetricians and Gynecologists, Fort Worth, Feb. 13-14, 1953. Dr. George Adam, Houston, Pres.; Dr. Carey Hiett, 815 Fifth Ave., Fort Worth, Secy.

Texas Chapter, American College of Chest Physicians, Houston, April 27, 1953. Dr. Robert B. Morrison, Austin, Pres.; Dr. Samuel Topperman, East Texas State Sanatorium, Tyler, Secy.

Texas Club of Internists. Dr. Herbert Hill, San Antonio, Pres.; Dr. Hatch W. Cummings, Jr., 203 Hermann Professional Bldg., Houston, Secy.

Texas Dermatological Society, Houston, April, 1953. Dr. C. H. McCuistion, Austin, Pres.; Dr. Thomas L. Shields, 1216 Pennsylvania Ave., Fort Worth, Secy.

Texas Diabetes Association, Houston, April 26, 1953. Dr. E. K. Doak, Houston, Pres.; Dr. Ivan Mayfield, 1318 Main, Lubbock, Secy.

Texas Division, American Cancer Society, Austin, Jan. 16-17, 1953. Mr. Frank C. Smith, Houston, Pres.; Mr. J. Louis Neff, 1609 Colorado, Austin, Executive Director.

Texas Heart Association, Houston, April 27, 1953. Dr. J. C. Crager, Beaumont, Pres.; Miss Roberta Miller, 411 Reserve Loan Life Bldg., Dallas, Executive Secy.

Texas Hospital Association, Galveston, May 12-14, 1953. Mr. Carroll H. McCray, Tyler, Pres.; Mrs. Ruth Barnhart, 2210 Main St., Dallas, Secy.

Texas Neuropsychiatric Association, Houston, April 27, 1953. Dr. Don Morris, Dallas, Pres.; Dr. John L. Otto, John Sealy Hospital, Galveston, Secy.

Texas Orthopedic Association, Houston, April 27, 1953. Dr. Felix Butte, Dallas, Pres.; Dr. Margaret Watkins, 3629 Fairmount St., Dallas, Secy.

Texas Pediatric Society, Dallas, Oct. 17-18, 1952. Dr. C. S. E. Touzel, Fort Worth, Pres.; Dr. M. C. Carlisle, 1410 Austin Ave., Waco. Secy

Texas Public Health Association, Galveston, Feb. 15-18, 1953. Mr. H. E. Drumwright, Dallas, Pres.; Mr. Earle W. Sudderth, Dallas County Health Department, Court House, Dallas, Executive Secy.

Texas Radiological Society, San Antonio, Jan. 23-24, 1953. Dr. Robert D. Moreton, Fort Worth, Pres.; Dr. R. P. O'Bannon, 650 Fifth Ave., Fort Worth, Secy.

Texas Railway and Traumatic Surgical Association, Houston, April 27, 1953. Dr. Everett Lewis, Houston, Pres.; Dr. W. D. Marrs, 306 Broadway, Fort Worth, Secy.

Texas Rheumatism Association, Dallas, Dec. 5, 1952. Dr. Robert H. Mitchell, Fort Worth, Pres.; Dr. Charles H. Cornwell, Marlin, Secy.

Texas Society for Mental Health, Austin, March 2-3, 1953. Mr. William Grant, Jr., Baytown, Pres.; Mrs. Elizabeth F. Gardner, 2504 Jarratt Ave., Austin 21, Executive Secy.

Texas Society of Anesthesiologists, Houston, April 27, 1953. Dr. John F. Winter, San Antonio, Pres.; Dr. C. R. Allen, John Sealy Hospital, Galveston, Secy.

Texas Society of Gastroenterologists and Proctologists, Houston, April 27, 1953. Dr. Jack Kerr, Dallas, Pres.; Dr. C. P. Hardwicke, 120 W. Seventh St., Austin, Secy.

Texas Society of Ophthalmology and Otolaryngology, Houston, Dec. 5-6, 1952. Dr. J. Charles Dickson, Houston, Pres.; Dr. Lyle Hooker, 627 Esperson Bldg., Houston, Secy.

Texas Society of Pathologists, Houston, Jan. 25, 1953. Dr. Charles T. Ashworth, Fort Worth, Pres.; Dr. Lloyd R. Hershberger, Shannon Memorial Hospital, San Angelo, Secy.

Texas Surgical Society, Austin, Oct. 6-7, 1952. Dr. Robert M. Moore, Galveston, Pres.; Dr. Albert W. Hartman, 414 Navarro St., San Antonio 5, Secy.

Texas Tuberculosis Association, Mineral Wells, April 9-11, 1953. Dr. David McCullough, Kerrville, Pres.; Miss Pansy Nichols, 208 E. Ninth, Austin, Executive Secy.

Texas Urological Society. Dr. R. E. Cone, Galveston, Pres.; Dr. Roy M. Morgan, Jr., Hermann Hospital, Houston, Secy.

DISTRICT

First District Society, El Paso, Feb. 13-14, 1953. Dr. Jim Camp, Pecos, Pres.; Dr. H. D. Garrett, First National Bldg., El Paso, Secy.

Second District Society, Big Spring, April 3, 1953. Dr. John Hogan, Big Spring, Pres.; Dr. Arch Carson, Box 111, Big Spring, Secy.

Third District Society, Lubbock, April 14-15, 1953. Dr. James A. Odom, Memphis, Pres.; Dr. James T. Hall, 1626 Fifteenth Street, Lubbock, Secy.

Fourth District Society, San Angelo, Oct. 8, 1952. Dr. B. A. Hallum, Brady, Pres.; Dr. Lloyd R. Hershberger, San Angelo, Secy.

Fifth and Sixth Districts Society, Corpus Christi, July 10-11, 1953. Dr. Y. C. Smith, Sr., Corpus Christi, Pres.; Dr. Robert J. Sigler, 1126 Third Street, Corpus Christi, Secy.

Seventh District Society, Austin. Dr. George W. Tipton, Austin, Pres.; Dr. D. B. Faubion, 1403-C Guadalupe, Austin, Secy.

Eighth District Society, Fall, 1953. Dr. Andrew S. Tomb, Victoria, Pres.; Dr. George E. Glover, Jr., Victoria, Secy.

Ninth District Society, Baytown, April 1, 1953. Dr. Otto F. Schoenvogel, Brenham, Pres.; Dr. Lyman C. Blair, 1212 Rothwell, Houston, Secy.

Tenth District Medical Society, Orange, Oct. 11, 1952. Dr. Peyton C. Clements, Lufkin, Pres.; Dr. Edmund D. Jones, 2575 South, Beaumont, Secy.

Eleventh District Society, Jacksonville, Fall, 1952. Dr. Roscoe Moore, Mineola, Pres.; Dr. Marlin T. Braswell, Henderson, Secy.

Twelfth District Society. Dr. J. B. Brown, Temple, Pres.; Dr. Neil D. Buie, Marlin, Secy.

Thirteenth District Society, Wichita Falls. Dr. R. E. Cowan, Graham, Pres.; Dr. Robert D. Moreton, 815 Medical Arts Bldg., Fort Worth, Secy.

Fourteenth District Society, Gainesville, June 9, 1953. Dr. W. P. Philips, Greenville, Pres.; Dr. L. W. Johnston, 502 W. College St., Terrell, Secy.

Fifteenth District Society, Texarkana, Oct. 3, 1952. Dr. C. B. Reed, Clarksville, Pres.; Dr. William E. Jones, 619 Main, Texarkana.

CLINICS

Dallas Southern Clinical Society, Dallas, March 16-19, 1953. Miss Betty Elmer, Medical Arts Bldg., Dallas 1, Executive Secy.

Central Texas Spring Clinic, Waco. Dr. Walter B. King, 2320 Columbus Ave., Waco, Secy.

International Medical Assembly of Southwest Texas, San Antonio, Jan. 27-29, 1953. Dr. John M. Smith, Jr., 205 Camden St., San Antonio, Secy.

New Orleans Graduate Medical Assembly, March 2-5, 1953. Dr. Woodard D. Beacham, Room 103, 1430 Tulane Ave., New Orleans 12, Secy.

North Texas-Southern Oklahoma Fall Clinical Conference. Dr. E. Aubrey Cox, Hamilton Bldg., Wichita Falls, Chairman.

Oklahoma City Clinical Society Conference. Oklahoma City, Oct. 27-30, 1952. Mrs. Muriel R. Waller, 512 Medical Arts Bldg., Oklahoma City 2, Executive Secy.

Postgraduate Medical Assembly of South Texas, Houston, 1953. Dr. C. A. Dwyer, Secy., 229 Medical Arts Bldg., Houston.

TEXAS MEDICAL CENTER

Dr. Frederick C. Elliott will become executive director of the Texas Medical Center on November 1, the board of trustees has announced. Dr. Elliott is resigning from his position as a vice-president of the University of Texas and dean of its Dental Branch to accept the new position. One of the original founders of the Texas Medical Center, Dr. Elliott has been a member and secretary of the board of trustees since its inception.

New buildings are under construction in the center for the M. D. Anderson Hospital for Cancer Research, the Texas Children's Hospital, St. Luke's Episcopal Hospital, and the University of Texas Dental Branch. Contract for the new library was scheduled to be let during October. Architects are at work on plans for a new Jefferson Davis Hospital to be constructed in the center if the citizens of Harris County vote an additional $4,500,000 in hospital bonds at a special election on November 4.

Psychology Training at M. D. Anderson Hospital

A new medical psychology training and research program has been inaugurated at the University of Texas M. D. Anderson Hospital for Cancer Research, Houston.

The new plan is a joint project of the hospital, the University's Hogg Foundation for Mental Hygiene, and the Department of Psychology of the University of Texas in Austin.

Fiske Fund Prize Dissertation

The trustees of the Caleb Fiske Fund of the Rhode Island Medical Society have announced that "The Present Status of Anti-Coagulant Therapy" is the subject for their prize dissertation of 1952. An award of $200 is offered for the best essay on this subject. Dissertations must be submitted by December 1, 1952. Further information may be obtained from the Rhode Island Medical Society, 106 Francis Street, Providence 3, Rhode Island.

MORTALITY FROM ALCOHOLISM DECLINES

During the past forty years mortality from alcoholism in the industrial population has declined by 85 per cent, reports the Metropolitan Life Insurance Company. Statisticians who note a decline in deaths from acute and chronic alcoholism from 6.3 per 100,000 during the period 1911-1917 to 0.9 per 100,000 in 1950 state that this low mortality does not indicate an index of alcoholism as a public health problem which still causes a billion dollar yearly economic loss to the country.

The problem now is being attacked constructively with more hospitals and municipal health departments establishing facilities for the study and treatment of alcoholism.

Oklahoma City Clinical Conference

The annual four-day conference of the Oklahoma City Clinical Society will be held October 27 and continue through October 30.

The American Academy of General Practice has classified the conference as a formal study course and academy members will receive credit towards the fifty hours of formal postgraduate study required of them every three years.

Distinguished guest lecturers for the conference will include:

DR. JOHN B. BARTRAM, Temple University School of Medicine, Philadelphia, pediatrics.

DR. JAMES A. DICKSON, Cleveland Clinic, Cleveland, orthopedics.

DR. RUBIN H. FLOCKS, State University of Iowa College of Medicine, Iowa City, urology.

DR. HOWARD K. GRAY, The Mayo Foundation, Graduate School, University of Minnesota School of Medicine, Rochester, surgery.

DR. FRANCIS L. LEDERER, University of Illinois College of Medicine, Chicago, otolaryngology.

DR. CLARENCE S. LIVINGOOD, University of Texas Medical Branch, Galveston, dermatology.

DR. ROSCOE L. PULLEN, Postgraduate School of Medicine of the University of Texas, Houston, medicine.

DR. JOHN H. RANDALL, State University of Iowa College of Medicine, Iowa City, obstetrics.

DR. WILLIAM L. RIKER, University of Illinois College of Medicine, Chicago, surgery.

DR. EDWIN L. RIPPY, Southwestern Medical School of the University of Texas, Dallas, medicine.

DR. LEWIS C. SCHEFFEY, Jefferson Medical College and Hospital, Philadelphia, gynecology.

DR. JOHN RUDOLPH SCHENKEN, University of Nebraska School of Medicine, Omaha, pathology.

DR. NEWTON D. SMITH, The Mayo Foundation, Graduate School, University of Minnesota School of Medicine, Rochester, proctology.

DR. JOSEPH B. VANDER VEER, Graduate School of Medicine, University of Pennsylvania, Philadelphia, medicine.

DR. ROLLAND J. WHITACRE, Huron Road Hospital, Cleveland, anesthesiology.

DR. HARVEY WHITE, Northwestern University Medical School, Chicago, radiology.

In addition to these guests, Dr. George F. Lull, secretary-general manager of the American Medical Association, will speak on "What Happens to Your A.M.A. Dues," and many of the Oklahoma City physicians will participate in the formal presentations.

All physicians who are members of their county societies and their wives are invited to attend the conference. A registration fee of $20 will cover all features of the meeting.

Additional information may be obtained by writing to the executive secretary, 512 Medical Arts Building, Oklahoma City.

POSTGRADUATE COURSES IN SAN ANTONIO

The San Antonio division of the Postgraduate School of Medicine of the University of Texas is holding four courses during October, November, and December. The first course, continuing from October 2 through November 13, is a general teaching conference, meeting three hours on Thursday afternoons.

Drs. W. W. Bondurant, Jr., Lawrence B. Reppert, and Merton M. Minter presided at the second course on diagnosis and treatment of cardiovascular disease, held October 10-11.

A course on abdominal surgery will be held November 14-15 with Drs. A. W. Hartman, J. W. Nixon, T. A. Pressly, and A. R. McComb presiding. Office gynecology is the subject of the fourth course to be held December 5 and 6. Drs. E. R. Chapman and F. W. Posey will preside. Tuition for the latter two courses will be $15.

Further information may be obtained from the Postgraduate School of Medicine of the University of Texas, Robert B. Green Memorial Hospital, 515 Morales Street, San Antonio.

University of Texas Medical Branch

A pediatrics conference will be held at the University of Texas Medical Branch in Galveston, November 17-21, by the Postgraduate Division of the University of Texas Medical Branch, in cooperation with the Department of Pediatrics, the University of Texas Child Health Program, the Texas Medical Association, the Texas State Department of Health, the Texas Academy of General Practice, and the University of Texas Postgraduate School of Medicine.

Guest speakers will include Dr. Douglas M. Buchanan, professor of pediatric neurology, University of Chicago; Dr. Donald E. Cassels, associate professor of pediatrics, University of Chicago; Dr. J. Louzoya, surgeon-in-chief, Hospital Infantil, Mexico City; Dr. Edward L. Pratt, associate professor of pediatrics, New York University-Bellevue Medical Center, New York; and Dr. Lawson Wilkins, associate professor of pediatrics, Johns Hopkins Medical School, Baltimore.

"Tumors of the Head and Neck" was the subject of the eleventh Tumor Postgraduate Course held at the Medical Branch, October 9-11. Guest speakers included Col. J. E. Ash, M. C., USA (Ret.), pathologist at the Suburban Hospital, Bethesda, Md.; Dr. Albert Davis, assistant professor of plastic surgery, Stanford Medical School, San Francisco; Dr. Theodore Eberhart, associate professor of radiology, Jefferson Memorial Hospital, Philadelphia; Dr. Gilbert Fletcher, radiologist, M. D. Anderson Hospital for Cancer Research, Houston; Dr. Neal Owens, professor of plastic surgery, Tulane Medical School, New Orleans; and Dr. A. O. Severance, pathologist, Baptist Memorial Hospital, San Antonio.

Sponsors for this course included the Texas State Department of Health, the Texas Academy of General Practice, the Texas Medical Association, the University of Texas Postgraduate School of Medicine, and the Postgraduate Division of the University of Texas Medical Branch.

The seventh annual James Greenwood lecture in neurosurgery will be given at the Medical Branch on November 24 by Dr. Herbert Olivecrona, professor of neurosurgery at the University of Stockholm, Sweden, on "The Treatment of Arteriovenus Aneurysms of the Brain."

Dr. John W. Middleton, associate professor of internal medicine and director of the new Ziegler Memorial Hospital for Diseases of the Chest, has been appointed to the advisory board of the American Trudeau Society.

Recent guest lecturers at the Medical Branch have included Dr. Pietro de Nicola, professor of medicine at the University of Pavia; Dr. F. J. Hodges, Jr., professor of radiology at the University of Michigan; Dr. Benjamin Felson, professor of radiology at the University of Cincinnati; Dr. Wolfgang von Heubner, professor of pharmacology at the Free University of Berlin; Walter J. Meek, Ph. D., emeritus professor of physiology at the University of Wisconsin; Dr. E. T. Carter, School of Aviation Medicine, Randolph Field; and Ludwig von Bartolanffy, professor of biology at the University of Ottawa.

PERSONALS

Dr. William F. Mengert, Dallas, and *Dr. Clarence S. Livingood,* Galveston, will be among the guest speakers taking part in the meeting of the Nashville Medical Assembly to be held October 29-31 in Nashville. Dr. Mengert also attended the five-day meeting in September of the American Association of Obstetricians, Gynecologists and Abdominal Surgeons, of which he is secretary, at Hot Springs, Va., reports the Dallas *Times Herald.*

Dr. Mavis P. Kelsey, Houston, gave a talk July 31 on "The Present Treatment of Hyperthyroidism" to the National College of Physicians and Surgeons meeting in Monterrey. Dr. Kelsey also spoke on "The Use of Radioiodine in the Diagnosis and Treatment of Thyroid Disease" at the Universidad de Nuevo Leon on September 4 in Monterrey.

Dr. E. O. Nichols, Sr. and *Dr. E. O. Nichols, Jr.,* Plainview, recently spent several months in Europe visiting various clinics, reports the *Bulletin* of the Potter County Medical Society.

Dr. Jose Molinar y Rey, El Paso, was honored in August with a testimonial dinner celebrating his fiftieth anniversary as a doctor, states the El Paso *Times.*

Dr. W. F. McCreight, Kirbyville, was honored on August 26 for his forty years of service as a doctor in that community, states the Quitman *Wood County Echo.*

Dr. C. M. Cash, San Benito, was honored recently for his fifty-four years of service as an active doctor by the Woman's Auxiliary to the Cameron-Willacy Counties Medical Society. A plaque commemorating his honor was presented to Dr. Cash according to the *Valley Morning Star.*

Dr. R. J. White, Fort Worth, and the former Miss Marie Whitty were married August 2 in Amarillo.

The mother of *Dr. E. D. Embree,* Houston, died August 16 in Belton, reports the Houston *Post.* Mrs. Embree had been a resident of Belton for sixty years.

Mrs. Fannie E. Arledge, wife of *Dr. W. I. Arledge,* Hillsboro, died recently in a Hillsboro hospital at the age of 72, reports the Dallas *News.*

Recent births reported by the *Bulletin* of the Potter County Medical Society include a daughter to *Dr. and Mrs. Wa T. Mok,* Amarillo, and a son to *Dr. and Mrs. Capres S. Hatchett, Jr.,* Amarillo. Other births reported by the *Alumni Bulletin* of the University of Texas Medical Branch include a daughter to *Dr. and Mrs. Alexander M. Finlay, Jr.,* Fort Worth, and a son to *Dr. and Mrs. George V. Miller,* Houston.

Also, a daughter was born on September 28 to *Dr. and Mrs. Matthew J. Buchele,* San Augustine.

TEXAS DIVISION, AMERICAN CANCER SOCIETY

The Texas Division of the American Cancer Society is holding its annual district meetings this fall. The schedule for these meetings is as follows:

District 1, El Paso, October 10.
District 2, Lamesa, October 22.
District 3, South, Plainview, October 15.
District 3, North, Pampa, October 16.
District 5, San Antonio, October 31.
District 6, Harlingen, November 6.
District 7, Lockhart, October 2.
District 8, Victoria, October 1.
District 10, Lufkin, November 20.
District 12, Temple, November 18.
District 13, Fort Worth, September 24.

Districts 4, 9, 11, 14, and 15 will meet later in the fall at times and places to be designated.

All meetings are certified by the American Academy of General Practice.

PHYSICIAN'S BAG FOUND IN DALLAS

A physician's black bag was found beside one of the highways in Dallas County during July and is now in possession of the sheriff. The bag contains a three section compartment of drawers, a Curolite, and a sphygmomanometer. It is thought that the bag may have been stolen from a car passing through the county. Any physician who has lost a bag is invited to get in touch with the Dallas County sheriff.

HEALTH RESOURCES ADVISORY COMMITTEE REPORT

In releasing a report of the activities for the past two years of the Health Resources Advisory Committee, Dr. John Steelman, acting director of the Office of Defense Mobilization, praised the cooperation given to the Committee by the nation's health groups.

The key to the splendid achievements of the Committee, Dr. Steelman declared, has been the close and effective working relationship it has developed not only with the government agencies, but with the national professional organizations, voluntary agencies, educational institutions, and other groups concerned with health.

The report states that one of the achievements of the Committee has been a better distribution than during World War II of medical personnel to military and civilian populations. Other significant accomplishments have been the development of a single national blood program to serve military, civilian defense, Red Cross, and civilian needs; better utilization of hospital personnel to alleviate the nurse shortage; and post-disaster planning as well as cooperation in the preparation of a manual for use in the Health and Special Weapons Defense Program. In addition, the Committee has made studies and recommendations regarding industrial health; has conducted surveys, inventories, and analyses of health resources of the nation; and has offered its opinion concerning legislation and activities relating to improvement of health conditions.

Emphasis has been placed on the needs that seemed most urgent during the defense mobilization period, the report pointed out, but the Committee's activities have covered most of the areas of responsibility originally assigned to it. These are (1) mobilization, allocation, and utilization of personnel for wartime health services; (2) environmental sanitation services, including industrial health services; (3) veterinary medical services, with special emphasis on biological warfare; (4) utilization of health facilities; (5) provision of health equipment and supplies; and (6) recommendations to assure maintenance of essential teaching and research in health fields.

National Advisory Committee

One of the earliest and most extensive projects has been the Committee's functions as the National Advisory Committee to the Selective Service System. Established in August 1950, shortly after the outbreak in Korea, the Health Resources Advisory Committee was set up at the suggestion of the President by the chairman of the National Security Resources Board. Its purpose was to advise the Board on matters concerning health resources of the nation as they pertain to national defense. On October 4, 1950, the President named the Health Resources Advisory Committee to be the National Advisory Committee to the Selective Service System as authorized in Public Law 779, the "doctor draft" law. Six months later the Committee and its supporting staff were transferred to the Office of Defense Mobilization.

The National Advisory Committee reviews and advises the Secretary of Defense regarding the Armed Forces requirements for physicians, dentists, veterinarians, and nurses, and advises the Department of Defense on the essentiality of reserve officers for civilian health needs. These procedures have brought about a greater understanding between civilian and military authorities on the needs for professional personnel. The nation's ability to provide medical personnel currently and in the future for civilians and the Armed Forces has been protected by avoiding unwarranted drains on the health supply of the Armed Forces.

Better distribution of medical personnel than existed during World War II has resulted. In the past two years approximately 5,000 physicians who otherwise would have been in military service have been available for civilian health services. At the same time, the Department of Defense has been saved from 40 to 50 million dollars and care of military personnel is of the best.

Working with the National Advisory Committee, groups in each state known as State Advisory Committees are responsible for advising local Selective Service Boards on a registrant's essentiality. Except for organized reserves, the state committees also decide the status of essentiality for military service of all reserve medical and dental officers whose recall to active duty is being considered. This decision on a man's essentiality is based upon whether or not he is filling a position vital to national health, safety, or interest either in a community practice, a hospital position, or teaching or research activities. By this system, the needs of civilian life, the needs of the Armed Forces, and the rights of the physician, dentist, veterinarian, and nurse are protected.

Recommendation

The Committee believes that a group similar to the Health Resources Advisory Committee should be continued not only during the mobilization period, but at other times as well. Therefore, it has recommended that a permanent committee be established in the federal government to coordinate activities in the health field for full utilization of the health potentials of the nation.

North Texas-Southern Oklahoma Conference

The 1952 North Texas-Southern Oklahoma Fall Clinical Conference was held September 17 in Wichita Falls with three visiting physicians as guest speakers.

Guests included Dr. Edward A. Schumann, Sr., consulting gynecologist and obstetrician for Philadelphia General Hospital, Memorial, Jewish, and Chestnut Hill Hospitals in Philadelphia; Dr. Stewart Wolf, professor and head of the Department of Medicine, University of Oklahoma, Oklahoma City; and Dr. Milton Porter, instructor in surgery at Columbia Presbyterian Medical Center and Attending Surgeon at Bellevue Hospital, New York.

Jeff H. Williams, an attorney, spoke at the dinner meeting closing the conference. The scientific program was as follows:

MORNING SESSION

Treatment of Malignant Lesions of the Large Bowel—Dr. Porter.
Anesthesia and Analgesia in Obstetrics—Dr. Schumann.
Relation of Life to Organic Disease—Dr. Wolf.

AFTERNOON SESSION

Problem of Gastrointestinal Hemorrhage—Dr. Porter.
Abnormal Uterine Contractions—Dr. Schumann.
Practical Consideration in Physiology of Pain with Special Reference to Treatment of Painful Condition—Dr. Wolf.

Dr. A. W. Pierce and Dr. George J. Seibold of Wichita Falls presided at the morning and afternoon programs. Special activities including a style show and luncheon for the members of the auxiliary were held.

Arthritis Research Fellowships Available

The Arthritis and Rheumatism Foundation is offering research fellowships in the basic sciences related to arthritis on both the predoctoral and postdoctoral levels. These fellowships will run for one year with prospect of renewal. Predoctoral fellowships will range from $1,500 to $3,000 per annum and the postdoctoral fellowships from $3,000 to $6,000. Deadline for applications is November 1. Awards will be made by February 15. Application forms and additional information may be procured by addressing the Medical Director, The Arthritis and Rheumatism Foundation, 23 West 45th Street, New York 36.

Court of Appeals Rules in Hoxsey Case

The United States Court of Appeals for the Fifth Circuit has ordered an injunction prohibiting the Hoxsey Cancer Clinic in Dallas from distributing in interstate commerce "brownish-black and pink colored liquids intended for use in the treatment and cure of cancer in man." This opinion is the result of an appeal in the case of the United States vs. Hoxsey Cancer Clinic, a partnership, and Harry M. Hoxsey, an individual, tried in the United States District Court, Dallas; it reverses the judgment of the trial judge. Under the law the defendants still have the right to petition for review by the United States Supreme Court.

According to the unanimous opinion of the Court of Appeals, "the overwhelming weight of the credible evidence requires a conclusion that the representation that the Hoxsey liquid medicines are efficacious in the cure of cancer is... false and misleading. The evidence as a whole does not support the finding of the trial Court that 'some it cures, and some it does not cure, and some it relieves somewhat.'"

The following principles are laid down in the Circuit Court opinion, based on testimony by cancer experts:

1. "... there is only one reliable and accurate means of determining whether what is thought to be cancer is, in truth and fact, actually cancer. This requires a biopsy, a microscopic examination of a piece of tissue removed from the infected and diseased region."

2. "... the opinion of a layman as to whether he has, or had, cancer, or a like opinion as to whether he has been cured and no longer bears the disease, if, in fact, it ever actually existed, is entitled to little, if any weight."

3. "... despite the vast and continuous research which has been conducted into the cause of, and possible cure for, cancer the aggregate of medical experience and qualified experts recognize in the treatment of internal cancer only the methods of surgery, x-ray, radium and some of the radioactive by-products of atomic bomb production."

4. "... Upon such subjects a Court should not be so blind and deaf as to fail to see, hear and understand the import and effect of such matters of general public knowledge and acceptance, especially where they are established by the overwhelming weight of disinterested testimony...."

TEXAS ACADEMY OF GENERAL PRACTICE

Dr. Chester U. Callan of Rotan was installed as the new president of the Texas Academy of General Practice during the annual assembly of the organization held September 15-16 in San Antonio.

Other officers of the academy elected at the meeting are Dr. Cecil Forrest Jorns, Houston, president-elect; Dr. John W. Tunnell, Taft, vice-president; and Dr. Woodson W. Harris, Austin, secretary-treasurer.

The next annual meeting will be held September 21-23, 1953, at Fair Park Auditorium in Dallas.

The Texas Academy of General Practice has authorized contributions in the amount of $50 each to be made to the chapters of the Student American Medical Association at the University of Texas Medical Branch, Galveston; Baylor University College of Medicine, Houston; and Southwestern Medical School of the University of Texas, Dallas.

INTERNATIONAL COLLEGE OF SURGEONS ELECTS TEXANS

Five Texas physicians received qualified fellowship degrees at the September 5 Assembly of the International College of Surgeons in Chicago. They are Drs. Henry Celaya, San Antonio; Robert Francis Gossett, San Antonio; Casey Earl Patterson, Dallas; William Bedell Swift, Fort Worth; and Walter Watkins, Amarillo. Two other Texans who were advanced from associate fellows to qualified fellows at this time are Drs. William T. Shell, Jr., and Erich Spier.

Southern Medical Association

The Dade County Medical Society will again host the Southern Medical Association's annual meeting in Miami from November 10 through 13. General headquarters for the meeting will be at Municipal Auditorium in Bayfront Park.

All physicians who are members in good standing of their county and state medical societies, even though they may not be members of the Southern Medical Association, may attend the sessions and other activities upon presentation of membership cards. There will be no registration fee.

At the opening assembly on November 10, Dr. Louis H. Bauer, Hempstead, N. Y., president of the American Medical Association, and the Hon. Spessard L. Holland, Bartow, Fla., United States Senator from Florida, will be among the guest speakers.

Dr. R. J. Wilkinson, president of the Southern Medical Association, will preside at the Association dinner to be held November 12. Election of officers and installation of the incoming president, Dr. Walter C. Jones of Miami, will take place during the program.

As in the past, twenty-one sections of the Association and several related organizations have scheduled scientific programs. A number of Texas physicians will present papers and lead discussions. Scientific and technical exhibits as well as motion picture films will be shown in the Municipal Auditorium. The annual men's golf tournament will be held on November 10 and 11.

Hotel reservations may be cleared through the Housing Bureau, Southern Medical Association Meeting, 320 N. E. Fifth Street, Miami 32. Additional information may be secured from Mr. C. P. Loranz, Empire Building, Birmingham 3, Ala.

VA COURSE IN PSYCHIATRY AND NEUROLOGY

The Veterans Administration is instituting a four month inservice training course in psychiatry and neurology to fit the needs of physicians without such previous training newly recruited for duty in its predominantly psychiatric hospitals. Physicians who have been engaged in general practice may request this training upon applying for a position at one of these hospitals.

The course will be held at Veterans Administration hospitals in Pennsylvania, California, and Illinois. Physicians will be employed at salaries commensurate with their training and experience, ranging from $5,500 to $11,800 per annum.

Information and applications may be obtained from Veterans Administration hospitals and regional offices, or by writing to the Chief Medical Director, Veterans Administration Central Office, Washington 25, D. C.

American Association of Blood Banks

The American Association of Blood Banks held its fifth annual meeting October 9-11 in Milwaukee. In addition to the scientific program featuring talks on many phases relating to blood banking, there were scheduled a refresher course for technicians and pathologists, the annual business meeting, and several panel discussions during the luncheons.

Medical Examiners Schedule Tests

Examinations will be given by the Texas State Board of Medical Examiners on November 13, 14, and 15 at the Menger Hotel in San Antonio. Applications should be in the office of the secretary, Dr. M. H. Crabb, 1714 Medical Arts Building, Fort Worth, at least ten days prior to the date of the examination.

LIBRARY SECTION

PACKAGE SERVICE

The package library consists of collections of reprints and other periodical material on various subjects, prepared for lending to members of the Association. Request for packages should be addressed "Library, Texas Medical Association, 1801 Lamar Boulevard, Austin, Texas." Twenty-five cents in stamps should be enclosed with the request to cover postage and part of the expense of collecting the material. Packages are allowed to remain in the hands of the borrower for 14 days.

ACCESSIONS

The following additions were made to the Library during September:

Reprints received, 1,090.

Journals received, 330.

Books received, 27.

Physician's Handbook, Krupp, Lange Medical Publications, Los Altos, Calif.

The Old Egyptian Medical Papyri, Leake, University of Kansas Press, Lawrence, Kan.

Research in Endocrinology, Collected Reprints, Werner, Belleville Daily Advocate, Belleville, Ill.

Laboratory Techniques in Biology and Medicine, Cowdry; *A Method of Anatomy,* ed. 5, Grant; *Operative Neurosurgery,* Gurdjian and Webster; *Malignant Disease and Its Treatment by Radium,* ed. 2, vol. IV, Cade; *Human Embryology, Prenatal Development of Form and Function,* ed. 2, Hamilton, Boyd, and Mossman, Williams and Wilkins Company, Baltimore.

Intracranial Aneurysms, Hamby; *This Is Your World,* American Lecture Series, Wilmer; *Physiological Bases of Gynecology and Obstetrics,* American Lecture Series, Reynolds; *Infrared Photography,* American Lecture Series, Massopust; *Kitchen Strategy,* Bayer and Green; *The Moral Theory of Behavior, A New Answer to the Enigma of Mental Illness,* American Lecture Series, Barta, Charles C. Thomas, Springfield, Ill.

Vocational Services for Psychiatric Clinic Patients, Rennie, Harvard University Press, Cambridge, Mass.

Cancer of the Lung, Overholt; *Malignant Lymphomas and Leukemia,* Craver, American Cancer Society, New York.

Gynecologic and Obstetric Pathology With Clinical and Endocrine Relations, ed. 3, Novak, W. B. Saunders Company, Philadelphia.

Handbook of Tropical Dermatology and Medical Mycology, vol. 1, Simons (editor), Elsevier Publishing Company, Amsterdam, Houston, New York, and London.

Brain Surgeon, The Autobiography of William Sharpe, The Viking Press, New York.

Living with Cancer, Kaehele, Doubleday and Company, Garden City, N. Y.

Pardon My Sneeze, Millman, Frye and Smith, Ltd., San Diego.

A Collection of Early Obstetrical Books, An Historical Essay, Hellman, New Haven, Conn.

Symposium on Treatment of Trauma in the Armed Forces, Division of Medical Sciences of the National Research Council and The Army Medical Service Graduate School, Walter Reed Army Medical Center, Washington 12, D. C.

SUMMARY OF SERVICES

Local users, 63.	Borrowers by mail, 54.
Local packages, 22.	Packages mailed, 63.

Films loaned, 42.

MOTION PICTURE FILM LIBRARY

Motion picture films on medical subjects, 16 mm., both silent and sound, some in color, and suitable for either medical or lay audiences, are available for loan to county medical societies, hospital staffs, or individual physicians, on request. Borrowers will be required to pay only the cost of shipment of the films, by express, with insurance, and for any damage to films in the hands of the borrower.

Request for films should be addressed to "Motion Picture Film Library, Texas Medical Association, 1801 Lamar Boulevard, Austin, Texas." A list of available films, with descriptions, will be furnished on request.

The following motion picture films were loaned by the Library during the month of September:

Adolescence, Introduction to (Mead Johnson)—St. Paul's Hospital School of Nursing, Dallas.

Another to Conquer (Texas Tuberculosis Association)—Stephenville Hospital and Clinic, Stephenville.

Anoxia, Physiology of (Linde Air Products)—Brackenridge Hospital School of Nursing, Austin.

Appendicitis in Childhood (Mead Johnson)—Seagraves Clinic-Hospital, Seagraves.

Appraisal of the Newborn (Mead Johnson)—St. Paul's Hospital School of Nursing, Dallas.

As Others See Us (American Hospital Association)—Brackenridge Hospital School of Nursing, Austin.

Cancer: The Problem of Early Diagnosis (American Cancer Society)—Seagraves Clinic-Hospital, Seagraves.

Cardiovascular Anomalies, Congenital, Amenable to Surgery (Mead Johnson)—Dawson-Lynn-Terry-Gaines-Yoakum Counties Medical Society, Seagraves.

Cerebral Palsy, Treatment, Training, and Education (Dr. Herbert Hipps)—St. Paul's Hospital School of Nursing, Dallas.

Cervical Smears (Dr. Karl J. Karnaky)—Washington-Burleson Counties Medical Society, Brenham.

Chest Disease, Surgery in (British Information Services)—Scott and White Memorial Hospitals School of Nursing, Temple, and Brackenridge Hospital School of Nursing, Austin.

Child Study: Life History of Mary (New York University Film Library)—St. Paul's Hospital School of Nursing, Dallas.

Coming Home (Texas Tuberculosis Association)—Stephenville Hospital and Clinic, Stephenville.

Diagnosis of Poliomyelitis (National Foundation for Infantile Paralysis)—Stephenville Hospital and Clinic, Stephenville, and Launey-Altick Clinic, Dallas.

Diphtheria and Croup (Lederle Laboratories)—St. Paul's Hospital School of Nursing, Dallas.

Dysmenorrhea, Primary (G. D. Searle and Company)—Brackenridge Hospital School of Nursing, Austin.

Empyema, The Treatment of (Mead Johnson)—Brackenridge Hospital School of Nursing, Austin.

Eyes for Tomorrow (Hurst Eye, Ear, and Throat Clinic)—Lillie Jolly School of Nursing, Houston.

Feeding the Infant During the First Year (Mead Johnson)—St. Paul's Hospital School of Nursing, Dallas.

Gastro-Intestinal Cancer: The Problem of Early Diagnosis (American Cancer Society)—Seagraves Clinic-Hospital, Seagraves.

The Heart: Cardiovascular Pressure Pulses and Electrocardiography (G. D. Searle and Company)—Seagraves Clinic-Hospital, Seagraves.

The Heart: Electrokymography, Venous Catheterization and Angiocardiography (G. D. Searle and Company)—Dr. N. L. Schiller, Austin.

Human Sterility (Winthrop-Stearns)—Nolan-Fisher-Mitchell Counties Medical Society, Sweetwater.

Lesions of Vulva, Vagina and Cervix (Dr. Karl J. Karnaky)—Washington-Burleson Counties Medical Society, Brenham.

Nasal Sinusitis (E. Fougera and Company)—Brackenridge Hospital School of Nursing, Austin.

Obstructive Laryngitis (Mead Johnson)—Brackenridge Hospital School of Nursing, Austin.

Oxygen Therapy Procedures (Linde Air Products)—Seton Hospital School of Nursing, Austin, and Brackenridge Hospital School of Nursing, Austin.

Pediatric Anomalies (Mead Johnson)—St. Paul's Hospital School of Nursing, Dallas.

Proof of the Pudding (Metropolitan Life Insurance Company)—Brackenridge Hospital School of Nursing, Austin.

Pyloric Stenosis, Congenital, Surgical Treatment for (Dr. Philip Thorek)—St. Paul's Hospital School of Nursing, Dallas.

Scarlet Fever (Lederle Laboratories)—St. Paul's Hospital School of Nursing, Dallas.

Skin Grafting of Extensive Burns (Eaton Laboratories)—Dr. N. L. Schiller, Austin.

Skin Studies (Procter and Gamble Company)—Launey-Altick Clinic, Dallas.

Urologic Conditions, Diagnosis of (Winthrop-Stearns)—Nolan-Fisher-Mitchell Counties Medical Society, Sweetwater.

Varicose Veins and Their Complications (Becton, Dickinson and Company)—Scott and White Memorial Hospitals School of Nursing, Temple.

X-Ray, Chest, Routine Admission in General Hospitals—Seton Hospital School of Nursing, Austin.

BOOK NOTICES

[1]Medical Disorders of the Locomotor System

ERNEST FLETCHER, M. A., M. D., M.R.C.P., *Physician in Charge of the Department of Rheumatism and Lecturer on the Rheumatic Diseases, Royal Free Hospital, London. Fabrikoid, 884 pages. $11. Baltimore, Williams and Wilkins Company, 1951.*

The title of this excellent book is no more comprehensive than its contents. A basic review of anatomy, physiology, and pathologic physiology of bones, joints, muscles, nerves, and connective tissue occupies a well earned place of importance.

Roentgenograms that are used are of the finest quality and are not excelled in any book that deals basically with bone and joint diseases. Microphotographs and photographs are excellent and used skillfully.

Charts such as one of the neuritides are fine for teaching purposes.

The difference in the English and American viewpoint is evident. The arthritides are emphasized and the somewhat different concept of the viewpoint about focal infection is stressed. There is no great difference in useful classifications even though they are far from being identical.

The section on mechanism of pain is excellent and readable. The common disorders are dealt with adequately, but the rare disorders are explained simply and magnificently. This book is veritably a storehouse of the unusual and is fine as a reference book.

The section on psychiatric aspects of disorders of the locomotor system is again a collection of the simple and the unusual.

A number of men have contributed to this book. The sections on physiotherapy and steroids are compact, yet helpful,

Slight deviations from our accepted ideas, such as that "San Joaquin fever" is limited to the San Joaquin Valley, arise from the sheer magnitude of the enterprise. The collagen disorders are dealt with but not adequately.

Gout is dealt with in too brief a fashion, although the content is by suggestion adequate. Any book written for all should devote more time to the details of management of this disease since it is at present mishandled as a rule.

The discussion of subcutaneous nodules is exceptional and available in few other sources.

The subject of backache is dealt with from a standpoint of fundamentals and should help all who read it.

Sciatica is dealt with intelligently. It should be read by all, particularly those who have through habit or reading learned to depend too much on the nucleus pulposus as the source of all sciatic pain.

This book is a "must" in everyone's library as a supplement to existing American works on similar subjects. Its English usage is so concise as to make it very readable. Those chapters written by the author himself are outstanding in their clarity of expression, profound in the magnitude of his experience, and remind one of the older English medical masters.

[1]*Henry N. Leopold, M. D., San Antonio.*

[2]Principles of Refraction

SYLVESTER JUDD BEACH, A. B., M. D., F.A.C.S., *Chief Ophthalmologist, Portland City Hospital; Member of Staff, Maine General Hospital; Past President, Portland Medical Association and New England Ophthalmological Society. Fabrikoid, 158 pages. $4. St. Louis, C. V. Mosby Company, 1952.*

In his usual lucid and entertaining style, Dr. Beach has made a real contribution to the literature on refraction. He has avoided the usual policy of quoting the dogmatic statements of previous authors and has presented the complex study of psychologic optics in a simple, clear, but adequate manner. He has included a great deal of material in a few words on the actual technique of refraction, presenting a common sense and brief combination of the more reasonable and accepted methods of refraction. He has shown the great wisdom of not presenting any one method as the "only right way." Some interesting comments on the psychologic aspects of refraction are presented. The book is short, entertaining, informative, and easily read. It is a book that will serve the beginner as an excellent foundation, while the experienced refractionist can read it with profit and pleasure.

[2]*J. L. Mims, Jr., M. D., San Antonio.*

[3]Cowdry's Problems of Ageing

ALBERT I. LANSING, PH. D., *Washington University, St. Louis. Third edition. Fabrikoid, 1,059 pages. $15. Baltimore, Williams and Wilkins Company, 1952.*

The third edition of this text is divided into three sections. The first is a consideration of the biologic and cellular problems of ageing. It contains the results of many experimental studies which are outlined in some detail, and the conclusions are thought-provoking and helpful to a better understanding of the biologic problems concerned.

The second section considers the clinical and organic problems of the ageing in which each system complex is ably handled by experts in the various fields of medicine.

The third section takes up the social and economic problems of the ageing and ably discusses this most important

[3]*Edwin G. Faber, M. D., Tyler.*

field in geriatrics. There is much helpful information on the rehabilitation and personal adjustments in old age.

There are forty-seven contributors, all of whom have made terse and pertinent contributions to this work. It is my opinion that if this book were in every physician's library and received careful attention, our aged patients would get much more intelligent and sympathetic treatment.

[4]Post-Graduate Lectures on Orthopedic Diagnosis and Indications—Volume III

ARTHUR STEINDLER, M. D., F.A.C.S., *Professor of Orthopedic Surgery, State University of Iowa, Iowa City. Cloth, 266 pages. $8.75. Springfield, Ill., Charles C. Thomas, 1952.*

Dr. Steindler is to be commended on his postgraduate lecture volumes. It is a noteworthy act for a well experienced teacher to convey his crystallized thoughts and knowledge to the rest of us.

This volume is concerned with tuberculosis of the skeletal system and also osteomyelitis. Under the heading of tuberculosis there is a general section covering the pathogenesis, pathology, clinical pathology, and diagnostic features of tuberculosis. The laboratory diagnosis is thoroughly covered. The course and prognosis of skeletal tuberculosis and the general treatment of tuberculosis is emphasized. Finally the local orthopedic treatment is well illustrated. Tuberculosis of various regions such as the spine, hip joints, knee, foot and ankle, and the upper extremities such as shoulder joint, clavicle, shoulder blade, elbow joint, and wrist are covered in this excellent work.

In the section dealing with osteomyelitis the orientation, pathogenesis, pathology, the clinical pathology including the symptoms of acute osteomyelitis and the findings in chronic osteomyelitis are described. Treatment of acute osteomyelitis, treatment of chronic osteomyelitis, and osteomyelitis of the spine and pelvis are discussed. The unusual types of osteomyelitis, that of typhoid, malta fever, Salmonella, smallpox, mycotic and echinococcus and madduromycosis, are accurately portrayed for the reader.

This represents a tremendous contribution to our present day orthopedic knowledge. Dr. Steindler should be commended for his untiring efforts and his unselfish devotion to teaching.

It is refreshing to have the importance of adequate rest stressed in this day of early ambulation and early discharge of the patient from the hospital. As is well known, rest is most important for tuberculosis and for other forms of bone and joint infections. Even in this period of antibiotics, miracle drugs, and operative procedures, rest still occupies or should occupy a foremost position in the mind of the treating physician.

[5]The Auricular Arrhythmias

MYRON PRINZMETAL *and others. Cloth, 379 pages. $16.50. Springfield, Ill., Charles C. Thomas, 1952.*

As pointed out in the preface, auricular arrhythmias have been of interest to scientists for many centuries, but extensive and adequate studies were not done until the late nineteenth century, when improved techniques and apparatus were developed. These investigations were climaxed by the work of Sir Thomas Lewis, whose circus movement theory of auricular flutter and fibrillation became widely accepted. With the advent of present day techniques and the availability of greatly improved apparatus, Prinzmetal and his associates began a restudy of the auricular arrhythmias.

The apparatus and techniques used by the authors, including a careful dissection to offer good exposure, high speed cinematography, electrocardiography, and the cathode-ray oscillograph, are described in detail.

Using these techniques, they observed that all of the auricular arrhythmias—premature systoles, tachycardias, flutters, and fibrillations—arise from single ectopic foci, spreading outward in all directions simultaneously and covering both auricles. The authors could reproduce any auricular arrhythmia almost at will by maintaining the rate of stimulation observed to be characteristic for the specific type of arrhythmia. The rate of stimulation to produce auricular tachycardia was greater than the rate at the sinus node but less than that of auricular flutter, and the rate of stimulation to produce flutter greater than that of tachycardia but less than that of fibrillation. They observed also that the ectopic focus initiating auricular flutter and fibrillation usually originates at the caudal end of the right auricle, whereas the other arrhythmias are initiated from an ectopic focus originating at the cephalic end of the right auricle. No circus movement was observed in auricular flutter and auricular fibrillation.

From these observations, the authors suggest a unitary nature of all the auricular arrhythmias and devote a chapter to this discussion.

Therapy is discussed briefly, including some new concepts of the probable pharmacologic action of quinidine and digitalis.

The Wolff-Parkinson-White syndrome also is discussed. From the authors' work it appears that this arrhythmia does not require the presence of the aberrant bundle of Kent, as postulated by others; however, in their study, invariably when the bundle of His was severed, the arrhythmia did not continue. Thus, Prinzmetal and his associates suggest that the syndrome must be the result of abnormal conduction through the normal conducting system.

This work in the concept of the auricular arrhythmias undoubtedly is revolutionary. The monograph should be read by the cardiologist, the physiologist, and certainly by the general practitioner, who must cope with auricular arrythmias in his daily practice. In the arrangement of the monograph, the authors apparently had the general reader in mind as there is an excellent summary of their observations and conclusions at the end of every chapter. The authors are to be commended for their clarity in the presentation of this technical subject and for this skillfully conducted research. The monograph is beautifully prepared and the illustrations and diagrams are excellently reproduced.

Endocrine Functions of the Pancreas

BERNARD ZIMMERMANN, M. D., *Department of Surgery, University of Minnesota, Minneapolis. Fabrikoid, 82 pages. $2.50. Springfield, Ill., Charles C. Thomas, 1952. American Lecture Series, No. 114.*

[6]Pathology of the Fetus and the Newborn

EDITH L. POTTER, M. D., PH. D., *Associate Professor of Pathology, Department of Obstetrics and Gynecology, The University of Chicago; Pathologist, The Chicago Lying-In Hospital. Fabrikoid, 574 pages. $19. Chicago, Year Book Publishers, Inc., 1952.*

This eagerly awaited book fulfills all expectations. Dr. Potter has drawn on her long experience and knowledge of pathologic findings in the infant and the fetus. The first chapters contain a succinct orientation of the early development of fetus and placenta, followed by abnormalities in placenta. The technique of postmortem in newborn infants is described. The causes of death of the fetus and the newborn are discussed and explained at length. Congenital abnormalities are covered, including major and important

[4]*W. Compere Basom, M. D., El Paso.*
[5]*William Rosenblatt, M. D., Wichita Falls.*
[6]*Stuart Allen Wallace, M. D., Houston.*

anomalies which interfere with life as well as other anomalies which are disfiguring or produce distortion.

The arrangement is systematic. The content is excellent and paper is of high quality, greatly enhancing the value of the numerous illustrations.

[7]The Diagnosis of Nervous Diseases

JAMES PURVES-STEWART, M. D., F.R.C.P., *Consulting Physician to Westminster Hospital and to The West End Hospital for Nervous Diseases; and* C. WORSTER-DROUGHT, M. D., F.R.C.P., *Physician to The West End Hospital for Nervous Diseases and Physician-Neurologist to the Metropolitan Hospital. Fabrikoid, 962 pages. $10. Baltimore, Williams and Wilkins Company. 1952.*

This book, in its tenth edition, is both an inspiration and a disappointment. The style is a departure from most modern textbooks of neurology inasmuch as clinical syndromes are discussed in terms of symptomatic expression rather than as manifestations of specific regions and pathways of systemic nervous disease. There are some advantages to this kind of organization, but confusion also results and obsolete syndromes are still retained.

The title of the book implies comprehensive coverage of nervous disease, allegedly both organic and psychologic. Many so-called "functional" syndromes are discussed. There is an excellent brief discussion of psychodynamics based on Freudian hypotheses and delineated in many of the classical psychiatric syndromes. There are good chapters on history taking and the inevitable necessity of knowing psychiatry to understand neurologic syndromes, and vice versa. Many discussions aptly point out the common syndromes in which neurologic disease is concommitant with, or obscured by, psychiatric reactions; also discussed are the common psychological reactions found with organic lesions. Traumatic neurosis, malingering, and insomnia are given chapter headings. There are excellent chapters on modern diagnostic methods including electromyography, electroencephalography, and cerebral angiography. It was disappointing however, to read again the traditional and yet outmoded suggestion for use of intrathecal therapy, included despite recent advances and the numerous dangers of the newer antibiotics administered by such routes. Another shortcoming is the lack of many excellent American references in the bibliography.

This book has real value as a reference book for the experienced neuropsychiatrist, the busy general medical practitioner, or the specialist, but it is far too comprehensive, too poorly organized, and too ridden with traditional clinical clichés for undergraduate medical students.

[8]The Unipolar Electrocardiogram

JOSEPH M. BARKER, M. D., F.A.C.P., *Cardiologist, Yater Clinic; Associate Professor of Clinical Medicine and Special Lecturer in Physiology, Georgetown University School of Medicine. Assisted by* JOSEPH J. WALLACE, M. D., F.A.C.P. *Advised by* WALLACE M. YATER, M. D., F.A.C.P. *Foreword by* FRANK N. WILSON, M. D., F.A.C.P. *Fabrikoid, 655 pages. New York, Appleton-Century-Crofts, 1952.*

This book surveys completely, didactically and by case report, the field of cardiology and its relation to the unipolar electrocardiogram. In preparing this book, Dr. Barker has consulted Frank N. Wilson, his teacher and the original investigator of the application of the electric theory to the interpretation of ventricular complex, as well as an impressive array of those who are responsible for progressive development of our present understanding of the unipolar electrocardiogram.

Although Dr. Barker states that the book is designed for the "student and physician with little or no background in electrocardiography," it will also challenge those who have devoted years to the study of electrocardiography. Its 626 pages of text summarize all the fundamental principles involved in our knowledge of unipolar electrocardiography, and there is an exhaustive résumé of research on this subject. In addition, there is a complete bibliography for reference. A simple method for the indexing of electrocardiograms is presented.

All would probably not agree with Dr. Barker's opinion that at the present time the vectocardiogram "has no more significance than the determination of the mean electrical axis." But to some, it is gratifying to find that one as well versed as he in the study of electrocardiography does not feel that vectocardiography has yet advanced to the point where it is imperative that the cardiologist include the cathode ray oscillograph in his armamentarium. Also to him, the practical necessity of determining the ventricular gradient lies in the future.

His explanation for the abnormalities of the electrocardiogram found in ventricular aneurysm, while sound, seems to exclude other plausible explanations. His complete, intelligible chapters on bundle-branch block probably were prepared before the recent publications of Sodi Pallares.

This book is outstanding in its field and should surely be included in the library of every internist and electrocardiographer, even the most experienced.

[9]Studies on Testis and Ovary Eggs and Sperm

Edited by EARL T. ENGLE. *Proceedings of a Conference Sponsored by the Committee on Human Reproduction, National Research Council in behalf of the National Committee on Maternal Health, Inc. Fabrikoid, 237 pages. $7.50. Springfield, Ill., Charles C. Thomas, Publisher, 1952.*

This monograph is actually a symposium, the proceedings of a conference on human reproduction edited by Earl T. Engle, chairman of the conference for the Committee on Human Reproduction of the National Research Council. The authors of the fourteen papers presented and the members of the conference are all internationally famous and have devoted most of their professional life to studies of human fertility. The various papers were excellently presented and ably discussed. The nature of the papers, however, is such that this monograph is primarily for those who are interested in the research aspects of sterility and fertility. Several of the papers, namely "Spermatogenesis in Testes of Men with Blocked or Absent Efferent Ducts," "Semen Quality in Fertile Marriage," and "Investigations into the Transport of the Ovum" may prove interesting to the clinician interested in sterility problems.

[10]A Textbook of Pharmacology

WILLIAM T. SALTER, M. D., *Professor of Pharmacology, Yale University School of Medicine. Fabrikoid, 1,240 pages. $15. Philadelphia, W. B. Saunders Company, 1952.*

In the preface, the author states that he has selected from the vast amount of pharmacologic data, those things which he believes the medical student and physician should understand. This approach offers a smooth reading text with a distinct clinical influence as has been the tendency of all recent texts in pharmacology. The sections and chapters are

[7]*H. Harlan Crank, M. D., Houston.*
[8]*Walter B. Whiting, M. D., Wichita Falls.*
[9]*Milton Turner, M. D., Austin.*
[10]*C. A. Handley, M. D., Houston.*

arranged to discuss the action of various agents on different organ systems, where possible, in the traditional form that has evolved for textbooks of pharmacology. A brief survey of unsolved problems with pertinent literature citation and a short synopsis is a noteworthy feature of each chapter.

In addition to a résumé of clinical application following the discussion of the action of the various agents described in each chapter, there are five chapters dealing primarily with the clinical application of drugs to several organ systems of the body. These are the eye, neuromuscular system, gastroenteric tract, the uterus, and the skin. The material in these chapters is largely a repetition of what has been stated previously in the text. Many of the chapters begin with a résumé of the basic physiology before the effect of chemical agents on the organ system is described. Although this is perhaps a desirable feature, it is a factor contributing to the large size of the book.

Each page is divided into two columns, which greatly facilitates reading. References at the end of each chapter are adequate, and the index permits rapid location of drugs, which are listed under both the more common trade names and the official names. The book describes the actions and uses of all the newer drugs used clinically at the time of writing, including the antibiotic, antihistaminic, and hypotensive agents. It should prove useful both to the medical student and to the physician.

[11]Blood Transfusion in Clinical Medicine

P. L. MOLLISON, M. D., M.R.C.P., M.R.C.S., *Director, Medical Research Council's Blood Transfusion Research Unit; Lecturer in the Department of Medicine, Post-Graduate Medical School of London. Fabrikoid, 456 pages. $8. Springfield, Ill., Charles C. Thomas, Publisher, 1951.*

With the giving of large amounts of group O blood during World War II to persons of other blood groups with seeming impunity, there developed a degree of complacency in giving blood transfusions. Now, however, there are increasing numbers of persons who have received blood and whose blood is developing antibodies. There are increasing reports of hemolytic transfusion reactions from such antibodies as the Kell and Duffy.

Dr. Mollison has in his book a comprehensive review of the literature of both this country and England on all the clinical phases of blood transfusion. He, of course, has added much through his own investigation, observations, and experiences.

Probably the most interesting part of the book to the general clinician is the section on physiology of the red blood cell, its source, fate, and effect upon the recipient in health and disease. The methods and techniques by which cells are studied have elucidated many problems and also are a source which later investigators may use in research.

To the laboratory worker this book will be valuable in that it gives in satisfactory detail the latest technique in ascertaining blood groups and subgroups, various compatibility tests, and methods for the isolation of antibodies. There is a section which deals with the investigation of hemolytic transfusion reactions which one can expect to become increasingly more useful.

The author, however, does not attach sufficient significance to the occurrence or treatment of the hemolytic reaction. He quotes Bull and associates as saying that provided the patient is not initially overhydrated before conservative therapy, the mortality should be negligible. This has not been the general opinion in this country. Consequently this phase of the treatise would seem to be the weakest. Hemolytic disease of the newborn is covered well.

This book is unquestionably a welcome addition to the literature on a subject that cannot help but be of increasing importance. The mechanics of its arrangement are excellent. Each idea is well outlined in bold print as the subject material is developed. The author has written the book in an enthusiastic manner which makes it as easy to read as any article in clinical medicine.

[11]*J. C. George, M. D., Brownsville.*

[12]Operations of General Surgery

THOMAS G. ORR, M. D., *Professor of Surgery, University of Kansas School of Medicine, Kansas City, Kansas. Fabrikoid. $14.50. Philadelphia, W. B. Saunders Company, 1951.*

Orr's Surgery is an exceedingly useful volume. It is well written and composed and is a useful text both for the resident in training and to the busy general surgeon as an excellent reminder.

It is brief but full, and the plates and descriptions are clear and concise.

Hospital Staff and Office Manual

T. M. LARKOWSKI, M. D., F.A.C.S., *Professor of Clinical Surgery, Stritch School of Medicine, Loyola University, Chicago, and* A. R. ROSANOVA, R. Ph., M. D., *Clinical Instructor, University of Illinois Medical School, Chicago. Cloth, 428 pages. $4.95. Great Neck, N. Y., Romaine Pierson Publishers, Inc., 1951.*

[13]Surgery and the Endocrine System

JAMES D. HARDY, M. D., F.A.C.S., *Assistant Professor of Surgery, University of Tennessee Medical College. Fabrikoid, 142 pages. $5. Philadelphia, W. B. Saunders Company, 1952.*

This monograph has a total of thirteen chapters. As stated in the preface, it is not a handbook of preoperative and postoperative care, but is a volume that provides the physiologic basis of surgical therapy. Also the volume gives further evidence of the abnormalities of function imposed by disease and injury.

Chapter one is devoted to a résumé of the alarm response. Here is shown the preeminent roles for the adrenal, thyroid, and pituitary glands. There are included sections dealing with the influence hormones exercise in regulation of metabolism of body fluids and shock, the physiologic aspects of nutrition in the individual's capacity to withstand trauma, and the endocrinology of surgical infections, thermal burns, tissue repair, and neoplasia. Chapter four is an outstanding bit of work. Here the author brings out the very good advantage of early ambulation. The last page of this chapter is good reading material not only for the surgeon, but the physician as well. The will to live is a very important prognostic value.

Two chapters of interest to the general surgeon are those discussing the function of the thyroid. A thorough discussion of the use of radioactive iodine is presented as well as surgery. Another of the best chapters in the book is chapter nine, which deals with surgical consideration of the adrenal glands; the action of several new drugs is brought out. The discussion on the physiology and anatomy of the pituitary, thymus, and gonads is brief, but is to the point and very informative.

All material in this book is concisely stated and all illustrations are good. One might get the impression from the title that the material is too detailed; however, for the general surgeon or the general practitioner, it is informative and good reading material.

[12]*Richard A. Lucas, M. D., Austin.*
[13]*Ernest F. Cadenhead, M. D., Brownwood.*

ORGANIZATION SECTION

AMERICAN MEDICAL ASSOCIATION

REGIONAL LEGISLATIVE CONFERENCES

Fifteen regional conferences have been planned by the Committee on Legislation of the American Medical Association during October, November, and December. Planned with an idea of informing leaders in state associations of the activities of the Washington office of the A.M.A. and about medical and health legislation before Congress, these conferences are open to interested physicians.

Texans have been invited to participate in the conference at Oklahoma City on November 19 or at New Orleans on November 21. Dr. F. J. L. Blasingame, Wharton, member of the A.M.A. Committee on Legislation, will participate in these two conferences.

TEXAS MEDICAL ASSOCIATION

EXECUTIVE COUNCIL MEETS

The Executive Council of the Texas Medical Association met September 20 at Austin to transact business which had arisen since the annual session in May. Most of the councils and committees gave reports; some of the high lights of these reports follow:

The Board of Trustees reported completion of the Association building and a satisfactory financial situation. The Executive Secretary announced a current membership totaling 6,278, the largest in the history of the Association. The President spoke at some length on the need for cooperative action by the medical profession to solve the problems of the day.

The Council on Medical Jurisprudence asked approval of its stand in favor of legislation to strengthen the Texas State Board of Medical Examiners in its efforts to enforce the Medical Practice Act and in opposition to a proposed amendment to the Texas Constitution providing for a State Medical Education Board and a medical education fund to finance students who promise to practice medicine in rural areas under regulations established by the state.

The Council on Medical Education and Hospitals announced that plans for four telephone broadcasts to be presented February 10, March 10, October 13, and November 10, 1953, and for four programs for each of the three Texas chapters of the Student American Medical Association are under way. The programs for the students will deal with the responsibility of the physician to his patients, the community, medical organizations, and himself.

The Committee on Rural Health recommended the establishment of rural health councils in each county and approval of a more vigorous approach by the State Health Department toward formation of public health units in communities where they do not now exist.

The Committee on Doctor Distribution revealed plans to make a survey of medical care in the state.

The Committee on Public Relations emphasized the problems on which it expects to concentrate in the coming months: the cost of medical care, emergency telephone call service, and doctor distribution.

The Council on National Emergency Medical Service asked approval of a recommendation that physicians in each county assume leadership in organizing the medical personnel and facilities of the area for immediate action in case of emergency, whether in peacetime or in wartime.

The Council on Scientific Work reported progress on plans for the 1953 annual session to be held at the Shamrock Hotel, Houston, the last week in April. As part of the celebration of the centennial anniversary of the Association, former Texans who have distinguished themselves in medical practice will participate in the program. The Council asked approval of a survey to be conducted jointly by the Council on Scientific Work and the Committee on Public Relations in conjunction with the Board of Trustees to determine how the annual sessions may be improved, such a study to be made in time for modification of the 1954 program if that seems advisable.

All of the reports were accepted and the recommendations approved.

On behalf of the Association, Dr. Lynn Hilbun of Longview, vice-councilor of the Eleventh District, presented Dr. J. M. Travis, Jacksonville, with a bronze plaque proclaiming him the general practitioner of the year for Texas. Dr. Travis was named for this honor at the annual session.

GENERAL PRACTITIONER OF TEXAS

Dr. John Maston Travis, General Practitioner of Texas for 1952, has received a bronze wall plaque from the Texas Medical Association in recognition of his honor. The presentation was made by Dr. Lynn Hilbun, vice-councilor for the Eleventh District, during a meeting of the Executive Council of the Association in Austin on September 20. Dr. Travis was selected for the honor by the House of Delegates at the annual session held earlier this year in Dallas.

Dr. J. M., as he is known throughout the medical profession, has practiced in Jacksonville since 1913 and has been one of the pioneers in improving rural health standards in East Texas. Through his chairmanship for many years of the health and sanitation committee of the East Texas Chamber of Commerce, Dr. Travis has played an active role in helping to subdue malaria, typhoid fever, rickets, pellagra, and other diseases formerly prevalent in that part of the state.

The son of Roland and Nan (Williams) Travis, Dr. J. M. was born in Canton on January 25, 1877. Upon completing his preliminary education in the public schools, Myrtle Springs Academy, and North Texas Normal College, he taught school in East Texas and the State of Washington to raise money for his medical education. Following this, Dr. Travis for three years attended what was then the Medical Department of the University of Kentucky and completed his medical studies at the old Southwestern Medical College in Dallas, receiving his doctor of medicine degree in 1907.

Dr. Travis returned to his boyhood community at Martin's Mill in Van Zandt County to begin his practice. After seven years, he settled in Jacksonville. Realizing the need for a hospital in Jacksonville, he was one of the co-founders of the Cherokee Sanitarium and later founder and guiding influence in the modern Nan Travis Hospital, one of the largest in East Texas at this time.

In 1914, through the efforts of Dr. Travis and his associates, Jacksonville became the first southern city to install a United States Public Health Service malaria control test

program. He was also instrumental in getting the first appropriation made by the State of Texas for the control of malaria and other kindred diseases. The money obtained was used to help in the organization of more than fifty county health committees and to carry out a program advocating better rural sanitation.

Always keeping abreast of the modern trends in medicine and the best means of helping his neighbors, Dr. Travis was one of the first physicians in the area to advocate the establishment of tuberculosis sanatoriums for Negroes. He also made an extensive study of the shortage of doctors in rural communities and small towns and was one of the originators of a plan to permit medical graduates to serve their internships in small town hospitals.

DR. J. M. TRAVIS

Dr. Travis is a member of the World Medical Association, the American Medical Association, and the Texas Medical Association through Cherokee County Medical Society. He is also an honorary member of the Southern Medical Association and a charter member and past vice-president of the Texas Academy of General Practice. He was vice-president of the Texas Medical Association in 1934 and for many years served as a member of the House of Delegates of the Association and councilor for the Eleventh District.

His selection as Texas' General Practitioner of the Year places Dr. Travis in nomination for a similar award to be presented by the American Medical Association. The national general practitioner title will be conferred in December.

DR. TRAVIS APPOINTED SECRETARY

The Board of Trustees of the Texas Medical Association has appointed Dr. J. M. Travis of Jacksonville as secretary of the Association to fill the vacancy created by the resignation of Dr. Sam N. Key. Dr. Key is a new member of the Board of Trustees. Dr. Travis's appointment was made at a meeting of the Board in Austin on September 20 and will remain in effect until the 1953 annual session.

ADDITIONAL COMMITTEES NAMED

Two additional committees have been named to serve the Texas Medical Association during the current year. They are as follows:

Telephone Postgraduate Broadcast Committee (Special Committee of Council on Medical Education and Hospitals) —Joe Kopecky, San Antonio, chairman; Charles T. Stone, Galveston; Henry M. Winans, Dallas; Mavis P. Kelsey, Houston; James D. Murphy, Fort Worth; Raleigh R. Ross, Austin; and Asher R. McComb, San Antonio.

Advisory Board to Texas Society of Medical Technologists —William O. Russell, Houston; S. W. Bohls, Austin; and Charles T. Ashworth, Fort Worth.

LIBRARY AND HEADQUARTERS BUILDING FORMALLY OPENED

The President of the American Medical Association, the Governor of Texas, one of the United States Senators from Texas, nine past presidents of the Texas Medical Association, and about two thousand Texas physicians, their wives, and interested citizens took part in the week's activities prior to and during the dedication of the new Memorial Library of the Texas Medical Association in Austin on September 19, 20, and 21.

Health Progress Week was proclaimed by Governor Allan Shivers and news wires of Texas relayed medical news and plans for the formal opening throughout the week. Dr. John M. Travis, Jacksonville, was awarded a plaque in honor of his selection by the Association as Texas' General Practitioner of the Year, a position which makes him eligible for a similar award given nationally by the American Medical Association.

Formal ceremonies began Friday afternoon at a program at which Dr. T. C. Terrell, Fort Worth, President of the Texas Medical Association, presided. Dr. William C. Finch, president of Southwestern University, Georgetown, gave the invocation, after which Dr. George Turner, El Paso, President-Elect, paid tribute to the past presidents of the Association and presented to the nine past presidents in attendance at the program a silver medallion and certificate.

In reviewing past accomplishments of medicine and the men who served as presidents of this Association, Dr. Turner said, "Upon the occasion of the dedication of this magnificent headquarters and Memorial Library building, it is fitting that we pause to pay tribute and honor to our past presidents. Each guided the destiny of our Association during his year as president and the sum total of these years brings us to the present. There is no way exactly to separate the past from the present because they are so closely interwoven and interdependent upon each other. The present is built on the past and today as we take pride in our state af accomplishments, we would be remiss indeed, if we did not speak of those who have gone before and are no longer actively serving."

Dr. G. V. Brindley, Temple, past president of the Association, introduced the speaker, Senator Lyndon B. Johnson, who spoke of the library as being more than a repository for books; saying, "it is an arsenal of weapons with which plagues and ailments shall be combated." The Senator stated, "I can foresee the day when all the great health movements in our state will be launched from this building. I can foresee the day when the program to fight cancer, tuberculosis, polio, and heart disease, will be inaugurated in broadcasts from this center, possibly from this very room."

Wearing the medallions given to them at the program September 19 honoring past presidents of the Texas Medical Association are the nine past presidents who were able to attend. Seated, left to right: Drs. W. B. Russ, A. A. Ross, John H. Burleson, Sam E. Thompson, and E. H. Cary. Standing, left to right, are Drs. Allen T. Stewart, B. E. Pickett, Sr., John H. Foster, and G. V. Brindley.

Senator Johnson also pointed out that medicine is being challenged by forces of socialism: "That this challenge is real, that this challenge is substantial, can be denied by no thinking man aware of the realities of our time. Socialized medicine is a concept which has many followers, well-organized, well-financed, and very determined. Those who embrace this philosophy have assumed the direction and control of medical treatment in one of the greatest nations of the earth. In Great Britain, they have taken over the profession of healing, lock, stock, and lancet. The British doctor has become a civil servant who punches the time clock and dispenses medicine by government regulation. In this country, we stand in no immediate danger of falling into this system. Our people have too much confidence in their doctors. They will look about them and see what their doctors are doing for the community on their own initiative. They will see that the profession is meeting the challenges of the day, that it is taking a positive program to combat the illness of the modern day.... It is not for the government, either at the county, state, or national level, to institute a system of medicine for its citizens. That is not the way to solve our problems, and we have them. The fruitful approach, the approach that should be taken by free men, is cooperation between every medical association and the individual citizen. Through that cooperation, we should strive to make good medical care available to good people regardless of their station in life."

In conclusion, Senator Johnson said, "We know what this library will mean to Texas. The knowledge now so conveniently available will be used to ward off death; to restore the maimed and the crippled; to comfort the afflicted and the distressed. To our friends of the medical profession, may I say... that I believe that all Texans are grateful to you. You have earned our confidence, our respect, and our affection by your devotion to our welfare. We believe, yes, we know, that you will go on to even greater heights."

The second part of the formal ceremonies took place Friday evening with Dr. Merton M. Minter, San Antonio, chairman of the Board of Trustees of the Association, as master of ceremonies. Guest speaker was Dr. Louis H. Bauer, Hempstead, N. Y., President of the American Medical Association and secretary-general of the World Medical Association. Dr. W. R. White, Waco, president of Baylor University, delivered the invocation.

The formal dedicatory words were given by Dr. Minter, who said, "Upon the cornerstone of this building one may read that the Texas Medical Association was organized in 1853. In just a few months a hundred years of glorious history will have been written. It seems fitting, then, that tonight we should dedicate this building to the men of medicine who so well served their fellow Texans during the past century.... tonight we are to dedicate to these men, to this art, and to this science, this building." Dr. Minter went on to say, "In this building, the Texas Medical Association will center all of its activities for the dissemination of knowledge to its six thousand members, and through them the people of our great state will be aided. May the next century, by the grace of God, be as glorious as was the past."

In appreciation of their work on the planning and furnishing of the building, Dr. Minter presented to Dr. and Mrs. Sam N. Key of Austin a silver bowl engraved with the signatures of all officers of the Texas Medical Association.

Then the auditorium-lounge was dedicated and named "The Sam Thompson Room" in honor of Dr. and Mrs. Sam E. Thompson of Kerrville, who donated a $50,000 bequest for the Memorial Library.

a. The Presidents and Presidents-Elect of the Association and the Auxiliary and the president of the hostess county auxiliary are pictured at the Auxiliary's Executive Board meeting. Seated left to right are Mrs. Robert F. Thompson, President of the Auxiliary, and Mrs. E. W. Coyle, President-Elect. Standing are Dr. T. C. Terrell, President of the Association; Mrs. Allan H. Neighbors, Jr., president of the Travis County Auxiliary; and Dr. George Turner, President-Elect of the Association.

b. During the meeting of the Executive Council, Dr. Lynn Hilbun (left), presents Dr. J. M. Travis (right) with a plaque naming him the General Practitioner of Texas for 1952.

c. Senator Lyndon B. Johnson (left), about to deliver the main address at the program honoring the past presidents of the Association, is greeted by Dr. T. C. Terrell.

d. Dr. Louis H. Bauer, President of the American Medical Association, gives the principal address at the dedication ceremonies.

e. Governor Allan Shivers (left) introduces Dr. Bauer. Dr. Merton M. Minter, chairman of the Board of Trustees (right), has just presented the Governor.

f. Dr. and Mrs. Sam N. Key admire the silver bowl presented to them by the Association in appreciation of their work planning and furnishing the new building.

g. Dr. and Mrs. Sam E. Thompson are introduced, following the naming of the auditorium-lounge as "The Sam Thompson Room."

Dr. Minter introduced Governor Allan Shivers, who spoke briefly before introducing Dr. Bauer. In part, the Governor said, "I think across the threshold of all knowledge and the storehouse of knowledge comes even a greater desire for additional learning, because out of a little learning certainly the birth for a desire for the greater things is born. And certainly this wonderful library and headquarters building that you have created here will serve not only as a storehouse for the knowledge that has been acquired through the medical history of the past, but will serve as an inspiration to those who seek further knowledge. And civilization as it has grown must continue to grow only out of its desire for a future of learning."

After making reference to the importance of a medical library in free societies, Dr. Bauer spoke of the importance of the Texas Medical Association to the American Medical Association and of the role that government has come to play in medicine. He stated that medicine is no longer a problem for the physician alone but is also a problem for the community as well.

"I urge you therefore to arouse your members and to persuade them to take an active interest, not only in medical science, which is their first love, but in socio-economic problems as well. The future of medicine in this country depends on an alert, informed, active profession. Physicians must not only be physicians, but must be interested and active in civic affairs. We must know not only what is going on nationally, but internationally. We are rapidly traveling down the road to complete socialism. Unless this trend is checked, not only will medicine become an assembly line product, but our entire economy and American way of life will be destroyed. I urge the medical profession to spearhead the drive for the maintenance of freedom in America," Dr. Bauer said.

In addition to the special programs on Friday, the doors of the new building were open all week-end for physicians and their families to tour, and on Sunday the public viewed the facilities of the Texas Medical Association through its library and central office. Throughout the day Sunday movies depicting medicine's contributions to healthier living were shown to the public. In connection with the building opening theaters in Austin held special showings of movies concerned with health subjects.

The Executive Council of the Association and the Executive Board of the Woman's Auxiliary to the Texas Medical Association held meetings on September 20 and September 18, respectively, in conjunction with the dedication ceremonies.

COUNTY SOCIETIES

Dallas County Society

September 9, 1952

(Reported by W. W. Fowler, Secretary)

The Reproduction of Cardiovascular Symptoms—Tinsley Harrison, Birmingham.

The Dallas County Medical Society met September 9 at Baylor Hospital in Dallas, with Frank Kidd, vice-president, presiding in the absence of the president.

In addition to the scientific talk outlined above, Mr. Don E. Sterling, a past president of the Central Dad's Club, spoke on "Americanism Committee, United States Junior Chamber of Commerce."

Applications for membership in the society approved at this time included those of John Lane Baskin, Davis Lee Sprinkle, William W. McClellan, Ben Goodwin, and E. James McCranie.

The society adopted a resolution commending the Texas Arthritis Foundation as worthy of community support. Resolutions regarding the deaths of Drs. F. E. Ormsby, Lloyd C. Tittle, and Edward P. Leeper were adopted. Also, a memorial upon the death of Dr. J. A. Simpson was given.

Gray-Wheeler-Hansford-Hemphill-Lipscomb-Roberts-Ochiltree-Hutchinson-Carson Counties Society

September 16, 1952

(Reported by Malcolm H. Wyatt, Secretary)

Merkel's Diverticulum—Carl Lang, Pampa.

The Gray-Wheeler-Hansford-Hemphill-Lipscomb-Roberts-Ochiltree-Hutchinson-Carson Counties Medical Society met in regular session on September 16 in Pampa.

Raymond Laycock reminded the society that the meeting of the Panhandle District of the American Cancer Society will be held October 16 in Pampa. Edward Williams moved that the cancer meeting be held instead of the regular monthly meeting of the medical society. The motion was approved. A committee composed of Raymond W. Laycock, Malcolm Wyatt, and Joe Donaldson was appointed to make arrangements for the cancer meeting.

J. M. Henry of Perryton and H. W. Hollingsworth of Phillips became members of the society at this time by transfers from their former medical societies.

Dr. Donaldson mentioned tentative plans for a dinner on October 11 honoring Walter Purviance of Pampa for fifty years of practice.

In addition to the business matters acted upon during the meeting, the society also heard a scientific talk as listed above.

Grayson County Society

September 9, 1952

(Reported by W. D. Blassingame, Secretary)

Differential Diagnosis of Limp in Children—Leon Ware, Dallas.

The Grayson County Medical Society met September 9 in Denison with twenty-seven members and guests present. Following dinner an announcement was made that the Poliomyelitis Treatment Center for North Texas has been set up and is functioning in Sherman.

The society accepted into membership George M. Malouf of Perrin Air Force Base. The transfer membership of Donald H. Brandt from the Tarrant County Medical Society also was announced.

The scientific talk listed above was presented.

Lamar County Society

September 4, 1952

(Reported by J. R. Kelsey, Jr., Secretary)

Cancer: The Problem of Early Diagnosis (motion picture).

The Lamar County Medical Society met on September 4. During the business meeting the society discussed the Keogh-Reed Bill, the request of the State Health Department to conduct a blood survey program for venereal disease in this area, and the problem of the local blood bank. The above named program was presented.

Lubbock-Crosby Counties Societies

September 2, 1952

(Reported by Wallace I. Hess, Secretary)

Simple Treatment of Simple Fractures of Upper Extremity—Elbert Loveless, Dallas.

The Lubbock-Crosby Counties Medical Society held its regular meeting September 2 in Lubbock. Roscoe L. Pullen, Houston, dean of the Postgraduate School of Medicine of

the University of Texas, spoke to the members, discussing the background of the state's needs for postgraduate instruction in all phases of the medical arts. He also pointed out the specific details of the application of a postgraduate medical program to the local needs of the Panhandle-South Plains area.

Fred Kallina reported on behalf of the public relations committee that a new inquiry would be sent to each member asking if they would be willing to participate in the society's emergency call system. J. D. Donaldson of the library committee announced that apparently space would be available in the new county library building for a doctors' reading room. He stated that the idea would be presented to the library board for approval. A résumé of the Keogh-Reed Bill was given by Frank Malone.

The president of the society, William H. Gordon, appointed Ben Hutchinson as chairman and Mina D. Watkins and M. M. Ewing as members of a medical advisory board to the Licensed Vocational Nurses' Training Program in Lubbock.

In addition to the business matters discussed at the meeting, Dr. Loveless gave the scientific paper as listed above.

Medina-Uvalde-Maverick-Val Verde-Edwards-Real-Kinney-Terrell-Zavala Counties Society

September 12, 1952

(Reported by C. R. Sutton, Jr., Secretary)

Pitfalls of Surgery—W. B. Russ, San Antonio.
Coaptation Plates—C. S. Venable, San Antonio.
Some Little Things in a Country Doctor's Day—Hershall La Forge, Uvalde.

The Medina-Uvalde-Maverick-Val Verde-Edwards-Real-Kinney-Terrell-Zavala Counties Medical Society met September 12 at the country club in Uvalde.

In addition to the members present, approximately ten guests from Uvalde and San Antonio attended the meeting. Those attending heard the talks listed above. The scientific program was followed by a business session and dinner in the club dining room.

Tarrant County Society

September 2, 1952

(Reported by William P. Higgins, Jr., Secretary)

Heart Disease in Pregnancy—A. M. Goggans, Fort Worth.
Discussion—C. P. Hawkins and Warren W. Moorman, Fort Worth.

The Tarrant County Medical Society held its regular meeting on September 2 in Fort Worth. Robert E. Casey, Billy N. Gray, and Richard X. Sands were elected to membership in the society, while the membership transfers of O. J. Wollenman, Jr., and Walter T. Edwards from the Collin and Hays-Blanco Counties Medical Societies were accepted.

J. H. Steger, chairman of the procurement and assignment committee, spoke regarding the activities of the committee, stating that its most important duty was to investigate the availability of any member when called into the armed forces.

Mal Rumph informed members that the Woman's Auxiliary to the Texas Medical Association would sponsor the annual essay contest on "Why the Private Practice of Medicine Furnishes This Country with the Finest Medical Care" under the direction of the Association of American Physicians and Surgeons. He moved that "the auxiliary be given the financial aid as needed to sponsor this contest," and the motion carried.

T. C. Terrell spoke on behalf of the Association of American Physicians and Surgeons and urged members to join. E. E. Anthony, Jr., also spoke regarding the purposes and accomplishments of the association and urged members to read the literature concerning the organization.

May Owen announced the Southwest Regional Cancer Conference on September 24 and 25.

The topic for the scientific portion of the meeting appears above.

Tom Green-Eight County Society

(Reported by Perry J. C. Byars, President)

The Tom Green-Eight County Medical Society in cooperation with the Young Women's Service League of San Angelo on September 3 opened a treatment center for handicapped children.

The clinic will function Monday through Saturday from 9 a. m. until 12 noon and will treat physically handicapped children of preschool and school ages. Children will be admitted for treatment after complete examination and referral by a medical doctor.

The aim of the work at the center is to help the physically handicapped child to become a more nearly self-sustaining and independent unit of society by teaching him practical uses of his muscles and by instructing his parents in procedures that will implement the therapy at the center. Four physicians, one from each specialty such as pediatrics; eye, ear, nose, and throat; psychiatry; and orthopedics, will be appointed by the medical society to serve for two years on the staff of the treatment center. A registered physical therapist and volunteer recreational therapist from the Service League will assist.

Parents will receive treatment and instruction in physical therapy, occupational therapy, and other educational measures. A minimum charge will be made for treatment to defray expenses. Further information can be obtained by writing to the Handicapped Children's Treatment Center, 115 West First Street, San Angelo.

Webb-Zapata-Jim Hogg Counties Society

September 9, 1952

(Reported by H. L. Warres, Secretary)

Ophthalmoscopic Study of Retinal Bleeding — Rene Livas, Nuevo Laredo.
Surgical and Medical Treatment of Tuberculosis—David Madero, Monterrey.
Symposium: Diagnosis and Treatment of Peptic Ulcer—R. H. Meredith, Leonides G. Cigarroa, and Albert C. King, Laredo.

The Webb-Zapata-Jim Hogg Counties Medical Society held a dinner meeting in Nuevo Laredo on September 9 in honor of the Nuevo Laredo Medical Society.

The above scientific program was given at the meeting.

Wharton-Jackson-Matagorda-Fort Bend Counties Society

September 9, 1952

(Reported by Lorraine I. Stengl, Secretary)

Practical Diagnosis and Management of Contact Dermatitis—E. R. Seale, Houston.

The Wharton-Jackson-Matagorda-Fort Bend Counties Medical Society met September 9 at the Wharton Country Club. Fifty-two members, guests, and members of the auxiliary attended the dinner meeting and heard the above scientific presentation. At a brief business meeting the society voted to award prizes of $25 for first place, $10 for second place, and $5 for third place to the three essays judged best to be submitted by local high school students in the annual Association of American Physicians and Surgeons essay contest.

Harold D. Kuykendall, Sugarland, was accepted by the society as a transfer member from the Panola County Medical Society.

AUXILIARY SECTION

STATE EXECUTIVE BOARD MEETING

The members and guests of the Executive Board of the Woman's Auxiliary to the Texas Medical Association met September 18, 1952, at the Austin Country Club, Austin. The meeting was called to order at 10 a. m. by Mrs. Robert Farris Thompson, El Paso, President. Mrs. Peyton R. Denman, Houston, gave the invocation and the Pledge and Credo were led by Mrs. Frank Haggard, San Antonio.

An address of welcome was presented by Mrs. A. H. Neighbors, Jr., president of the Travis County Auxiliary. The response was given by Mrs. O. W. Robinson, Paris, immediate past president of the State Auxiliary.

Mrs. George Turner, El Paso, First Vice-President of the Woman's Auxiliary to the American Medical Association, brought greetings from the National Auxiliary and stressed enlistment of members.

Greetings from the past presidents of the State Auxiliary were brought by Mrs. A. B. Pumphrey, Fort Worth. Eleven past presidents were present: Mrs. Scott C. Applewhite, San Antonio; Mrs. G. V. Brindley, Temple; Mrs. P. R. Denman, Houston; Mrs. Eugene C. Ferguson, Beaumont; Mrs. Frank N. Haggard, San Antonio; Mrs. Samuel M. Hill, Dallas; Mrs. F. F. Kirby, Waco; Mrs. O. M. Marchman, Dallas; Mrs. A. B. Pumphrey, Fort Worth; Mrs. O. W. Robinson, Paris; and Mrs. George Turner, El Paso.

A report from the A.M.A. convention was given by Mrs. E. W. Coyle, President-Elect of the State Auxiliary. She told of 924 women representing 60,000 Auxiliary members attending the annual meeting of the Woman's Auxiliary to the A.M.A. in Chicago, June 8 to 13. Texas had twelve delegates present. The revisions to the Constitution, recommendations, resolutions, and reports are published in the August *Bulletin*. The minutes of the meeting also will be mailed to *Bulletin* subscribers.

Upon motion of Mrs. Joe D. Nichols, Atlanta, the reading of the minutes of the May Executive Board meeting was omitted, as the minutes had been approved by an appointed committee and had been published in the July JOURNAL.

Telegrams from Mrs. S. H. Watson, Waxahachie; Mrs. Guy Jones, Dallas; and Mrs. T. L. Gary, Jr., Corsicana, were read.

A letter from Dr. Troy Shafer, chairman of the Committee on Public Relations of the Texas Medical Association, expressing his appreciation for the letter Mrs. Thompson had written him upon his acceptance of this chairmanship, was read. A letter from Mrs. V. Eugene Holcombe, President of the Southern Medical Auxiliary, announced that the meeting of the Southern Medical Association and Auxiliary would be held in Miami, November 10-13.

Mrs. E. W. Coyle, San Antonio, moved that a gift be made to the Library Fund as a memorial for Dr. William M. Gambrell, the amount to be left to the decision of the Finance Committee. This motion was seconded and passed.

The Executive Board, upon motion by Mrs. Coyle and seconded by Mrs. Turner, approved the resolutions and recommendations from the Auxiliary to the A.M.A. as read from the *Bulletin* and asked that these be presented to the county auxiliaries.

Mrs. Thompson, President, then gave her report as Mrs. R. T. Travis, Jacksonville, First Vice-President, took the chair. Mrs. Thompson emphasized two points. First, she recommended that the State Auxiliary consider giving a set of three books to each county auxiliary to place in libraries where they might be used for the essay contests sponsored in high schools by the auxiliaries in cooperation with the Association of American Physicians and Surgeons. The books are "Compulsory Insurance and the Welfare State" by Melchior Palyi, "The Key to Peace" by Clarence Manion, and "Revitalizing a Nation" by Douglas MacArthur. Mrs. Turner moved and Mrs. P. R. Denman seconded that the Board approve the buying of seventy-two copies of this set of three recommended books to be given to all of the county medical auxiliaries in Texas. The motion was passed.

Second, Mrs. Thompson announced that the Board of Trustees of the Texas Medical Association had given to the Auxiliary a room in the new Library Building. The Resolutions Chairman, Mrs. P. R. Denman, Houston, moved that a rising vote of thanks be given the Board of Trustees and a letter of appreciation be sent to Dr. Merton M. Minter, San Antonio, chairman of the Board.

The following committee was named to approve the minutes: Mrs. Speight Jenkins, Dallas; Mrs. Troy Shafer, Harlingen; and Mrs. Delphin Von Briesen, El Paso. Recess for luncheon was announced.

At the luncheon table a challenging message was brought by Dr. T. C. Terrell, Fort Worth, President of the Texas Medical Association. He stressed consideration of the following objectives and issues: citizenship, tidelands control, federal aid to education, civil defense, public relations, better health, educational program of the A.M.A., and Library Committee.

Dr. George Turner, El Paso, President-Elect of the Texas Medical Association, spoke of the need of returning our country to true Americanism. Dr. Minter, chairman of the Board of Trustees, told of the Library Building being dedicated the next day.

Dr. Shafer referred to the Woman's Auxiliary as the Association's "ace in the hole" and said that the essay contest for high school students must be continued. He urged encouragement of the twenty-four-hour emergency medical service and declared that politically, this is the "Year of Decision."

W. E. Syers, public relations counsel for the Texas Medical Association, and Miss Harriet Cunningham, managing editor of the TEXAS STATE JOURNAL OF MEDICINE, also brought greetings and cordial invitations to attend the dedication service and visit the new Library Building.

A School of Instruction program entitled "Meeting of the Program Committee" was given by Mrs. G. V. Brindley, Temple. The cast for the play, all of Temple, were as follows: Mrs. Brindley, chairman, Mrs. Bartow Talley, Mrs. Raleigh Curtis, Mrs. L. M. Cochran, Mrs. V. J. Simmon, Mrs. Fred Hammond, and Mrs. G. V. Brindley, Jr. Various phases of work and study in Auxiliary activities were emphasized. The closing feature was a poem by Mrs. A. E. Moon, Temple, called "The Doctor's Wife."

Officers of the Woman's Auxiliary to the Texas Medical Association: President, Mrs. Robert F. Thompson, El Paso; President-Elect, Mrs. E. W. Coyle, San Antonio; First Vice-President (Organization), Mrs. R. T. Travis, Jacksonville; Second Vice-President (Physical Examinations), Mrs. Troy A. Shafer, Harlingen; Third Vice-President (Today's Health), Mrs. P. R. Jeter, Childress; Fourth Vice-President (Program), Mrs. John D. Gleckler, Denison; Recording Secretary, Mrs. Carlos R. Hamilton, Houston; Treasurer, Mrs. Oscar Marchman, Jr., Dallas; Corresponding Secretary, Mrs. Newton F. Walker, El Paso; Publicity Secretary, Mrs. A. H. Neighbors, Sr., Austin; Parliamentarian, Mrs. Joe D. Nichols, Atlanta.

As the result of a request by Mrs. A. B. Pumphrey, Fort Worth, legislative chairman, for a hand-showing of persons who voted in July, it was learned that all members present had voted.

Reports of officers, council women, committee chairmen, and county presidents were given. Written reports were filed with the Recording Secretary.

Messages of love were sent to Mrs. M. L. Graves, Houston, and Mrs. S. H. Watson, Waxahachie, and messages of sympathy to Dr. and Mrs. Guy Jones, Dallas, and a past president, Mrs. William M. Gambrell, Austin.

Mrs. H. D. Hatfield, El Paso, editor of the *Newsletter*, was presented and she solicited items of interest for the publication, which will go to the 4,062 Auxiliary members in Texas. She announced that "Rehearsal for Duty" is being reprinted, and hopes this second edition will reach many.

There were seventy present for a luncheon at which Mrs. Thompson was hostess.

The meeting concluded with an expression of appreciation to the President and to the Travis County Auxiliary.

MRS. CARLOS R. HAMILTON, Houston,
Recording Secretary.

AUXILIARY TO SOUTHERN MEDICAL ASSOCIATION

The Woman's Auxiliary to the Southern Medical Association has on its executive board this year eight members from Texas. They include Mesdames Fred Horn, Dallas, councilor; Oscar W. Robinson, Paris, vice-councilor; S. A. Collom, Sr., Texarkana; Frank N. Haggard, San Antonio; and E. H. Cary, Ridings E. Lee, Oscar M. Marchman, and L. S. Thompson, all of Dallas.

The Auxiliary will meet in Miami, November 10 through 13. Mrs. Ralph B. Eusden, president of the Woman's Auxiliary to the American Medical Association, and Mrs. John McCusky, a vice-chairman of the same organization, will be guest speakers. Wives attending the Southern Medical Association meeting with their husbands are invited to take part in the Auxiliary activities.

AUXILIARY NEWS

Brazoria County Auxiliary

Members of the Brazoria County Auxiliary met with their husbands for dinner in Freeport, September 25. At the business session, Mrs. J. S. Montgomery, Jr., Angleton, president, introduced Mrs. G. B. Brown, Angleton, and Mrs. Elmer Heimbigner, Lake Jackson, new members of the auxiliary.

The new auxiliary yearbooks were distributed. Mrs. Montgomery reported on the meeting of the State Executive Board held in Austin on September 18. The group agreed to sponsor the essay contest conducted annually by the Association of American Physicians and Surgeons. Information regarding the contest will soon be given to the local high schools in the area.

Announcement was made that Lela Mae Johnson, the student nurse at Prairie View College being sponsored by the auxiliary, has qualified by examination for the four year course in nursing. Mesdames Montgomery, M. Warren Hardwick, A. O. McCary, and W. D. Nicholson planned to go to Victoria on October 1 to attend a luncheon and meeting, with the purpose of organizing the Woman's Auxiliary to the Eighth District Medical Society.

Cass-Marion Counties Auxiliary

The Woman's Auxiliary to the Cass-Marion Counties Medical Society met for dinner September 11 in Atlanta with members of the medical society. Following dinner, the two groups held separate business meetings, with that of the auxiliary being held in the home of Mrs. Jesse Brooks, president. The members discussed their plan to sponsor a film emphasizing nurse recruitment. It was decided to show the film in the various towns in the two counties at dates to be announced later.—Mrs. T. M. Steed, Secretary.

Harris County Auxiliary

The Harris County Auxiliary held its annual fall tea in Houston on September 29. Hostesses for the event were the officers of the auxiliary, Mesdames J. Peyton Barnes, Jack Brannon, Edward T. Smith, Otis Flynt, T. P. Shearer, R. C. L. Robertson, Daniel E. Jenkins, W. P. Bonin, and W. M. Wallis.

Alternating at the silver services were Mesdames Henry C. Haden, M. L. Graves, Peyton R. Denman, T. A. Sinclair, Frank L. Barnes, Jacob F. Schultz, Guy E. Knolle, and John T. Porter.

Mrs. Mildred Milligan gave the musical program. Chairman of the arrangements for the tea, which marked the auxiliary's first fall affair, was Mrs. Jack Brannon.

Navarro County Auxiliary

The Woman's Auxiliary to the Navarro County Medical Society met September 5 at the home of Mrs. C. L. Gary, Corsicana, president. Plans were made for the coming year. Mrs. Will Miller outlined the mass chest x-ray program to be conducted by the local Red Cross chapter in November. The auxiliary voted to assist with this project.—Mrs. S. H. Burnett, Secretary.

DEATHS

R. Y. LACY

Dr. Robert Yeager Lacy, Pittsburg, Texas, a former vice-president of the Texas Medical Association, died of cerebral thrombosis and cardiac decompensation August 2, 1952, in the hospital which he founded.

Dr. Lacy was born January 1, 1877, in Palestine to Col. and Mrs. W. M. Lacy. Col. Lacy, one-time candidate for Governor, was superintendent of the state prison at Rusk. Dr. Lacy's grandfather, William Lacy, was a signer of the Texas Declaration of Independence. Dr. Lacy attended Southwestern University and the University of Texas School of Medicine, and was graduated in 1901 from the Jefferson Medical College of Philadelphia. Dr. Lacy practiced medicine in Pittsburg for fifty-two years. During World War I he was a captain in the Army. He was one of the founders of the Pittsburg Medical and Surgical Hospital.

A member of the American Medical Association and the Texas Medical Association through Camp and Taylor-Jones

An obituary ordinarily will not be published more than four months after date of death. Cooperation in reporting deaths of physicians and in furnishing appropriate biographical material promptly is solicited.

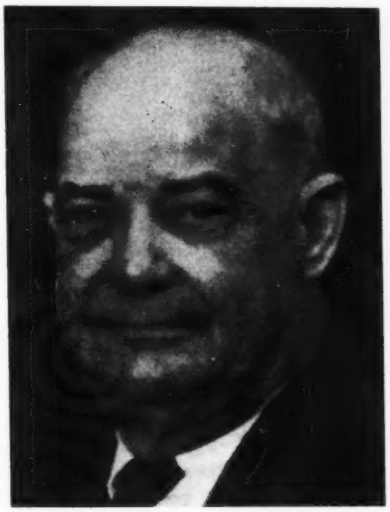
Counties Societies, Dr. Lacy also held membership in the Fifteenth District Society, of which he was a past president, and the American Academy of General Practice. In 1917 and in 1932 he was elected vice-president of the Texas Medical Association and for several years he served as president of the Camp County Medical Society, a position he held at the time of his death. Dr. Lacy was a past president of the Rotary Club and was vice-president of the First State Bank when he died. He was a member of the Red Cross of Constantine, high order of Masonry, and a member of the Presbyterian Church.

On October 30, 1901, he married Miss Florence Harmon of Bryan, who died in 1921. In 1924 Dr. Lacy married Mrs. M. N. Fleming of Mount Pleasant. Besides his wife Dr. Lacy is survived by a brother, Hensley Lacy of Georgia; a son, William Lacy, Houston; a daughter, Mrs. W. O. Salter, Bay City; and two stepchildren, Mrs. M. E. Larkin, Mount Pleasant, and Leslie J. Fleming, Fort Worth.

J. D. HARTZO

Dr. James Daniel Hartzo, McLeod, Texas, died June 18, 1952, of uremia in an Atlanta hospital.

Born September 20, 1868, in Smithland, Marion County, Dr. Hartzo practiced medicine in that area for fifty years and lived most of his life within a 25 mile radius of Smithland. The son of Daniel Hartzo and Parthenia (Harrell) Hartzo, he attended country schools, and received his medical education at old Memphis Medical College, later taking refresher courses at Tulane University School of Medicine.



DR. JAMES D. HARTZO

He practiced in Louisiana before moving to McLeod, Atlanta, and again to McLeod.

In 1951 Dr. Hartzo was elected to honorary membership in the Texas Medical Association of which he was a member for many years through Cass-Marion Counties Medical Society. He held membership in the American Medical Association. He was a member of the Royal Arch Masons, the Eastern Star, and the Baptist Church.

In 1896 Dr. Hartzo married Miss Clara A. McLemore, daughter of Dr. James G. McLemore of Vivian, La. She preceded him in death in 1916. Surviving Dr. Hartzo are a son, S. A. Hartzo of Lake Forest, Ill., and a daughter, Mrs. Edith Coleman of McLeod.

F. W. LAWSON

Dr. Frank Wesson Lawson, Orange, Texas, died of a heart attack on July 17, 1952, in an Orange hospital.

Dr. Lawson was born in Navasota on November 26, 1875. His father was David B. Lawson and his mother was Lucy (Nichols) Lawson, for whom the town Nichols, S. C., was named. Dr. Lawson spent his boyhood on a farm and attended school in Grimes County. At the age of 16 he entered Southwestern University at Georgetown, where he received a bachelor of science degree in 1896, and in 1899 he was graduated from the University of Texas School of Medicine. Prior to his death, Dr. Lawson received a certificate presented at the 1952 graduation exercises to graduates of fifty years or more from the University of Texas Medical Branch.

For three years Dr. Lawson practiced in Grimes County, and on July 1, 1902, he moved to Orange, where he set up

DR. FRANK W. LAWSON

a general practice in medicine and surgery, remaining in Orange until his death. Dr. Lawson took graduate work at Polyclinic and at the Medical Department of Tulane University, both in New Orleans. On several occasions he served as health officer of Orange, and for more than thirty years he was examining surgeon for the Southern Pacific Railroad and local surgeon for the Missouri Pacific Railroad.

A member of the American Medical Association and the Texas Medical Association through Orange County Medical Society, Dr. Lawson was secretary-treasurer of his county medical society for several terms and in 1946 he was elected to honorary membership in the state Association. Dr. Lawson was a member of Kappa Sigma fraternity and Alpha Mu Pi Omega medical fraternity. He was a Methodist.

On February 15, 1911, Dr. Lawson married Miss Hirma Arceneaux of Beaumont, who survives, as do his daughters, Mrs. John K. Chiasson, Port Arthur, and Miss Kathryn Lawson, Orange.

D. B. WESTERMAN

Dr. Daniel Bennett Westerman, Cooper, Texas, died July 6, 1952, in Paris, Texas, as a result of a cerebral hemorrhage.

Dr. Westerman was born on March 3, 1870, at Sulphur

Bluff, the son of Daniel Sanders and Delphia Ann Westerman. He attended East Texas State Teachers College at Commerce and then continued his studies at the old Barnes Medical College in St. Louis. He received his medical degree in 1905. Dr. Westerman began his practice of medicine in Vasco. He remained there for approximately ten years before moving to Charleston, where he lived for some twelve years. During this time Dr. Westerman did postgraduate work in Louisiana and California and interned at Parkland Hospital, Dallas. About 1920 he moved to Cooper to spend the remainder of his professional life.

Dr. Westerman was a member for many years of the American Medical Association and the Texas Medical Association through the Delta and Dallas Counties Medical Societies. He was president and secretary of the Delta County Medical Society several times. He served his county as health director and during World War II was a member of the

DR. DANIEL B. WESTERMAN

committee on procurement and assignment of physicians and dentists. Dr. Westerman took a special interest in helping the needy. He was a thirty-second degree Scottish Rite Mason.

Dr. Westerman was married twice. He is survived by his second wife, the former Mrs. Fay McKee Allday; two children by the first marriage, a son, Pat Westerman, Dallas, and a daughter, Mrs. Richard Sydnor, Winter Park, Fla.; and two sisters, Mrs. Della Brymer, Sulphur Bluff, and Mrs. Kate Laws, Big Spring.

J. W. BROWN

Dr. John William Brown, Austin, Texas, former state health officer of Texas, died at his home August 18, 1952, following an illness of several years.

Dr. Brown, the son of the Rev. Alanson and Catherine (Moore) Brown, was born on March 25, 1885, in Lockhart. He obtained his early education in the public schools and attended Coronel Institute in San Marcos. Dr. Brown received his medical degree from Vanderbilt University School of Medicine, Nashville, in 1910. He served his internship at Providence Sanitarium in Waco.

In 1912 Dr. Brown began general practice at Bremond. He remained in Bremond until 1915, when he moved to Pearsall and practiced there until 1917. In 1920 he accepted a position with the city of El Paso as chief of the sanitary and street department; he was a practicing physician as well. In 1922 Dr. Brown was appointed city health officer of El Paso and remained in that position until 1926. During this time he was granted a leave of absence from his office in order to attend Johns Hopkins University, Baltimore. Here Dr. Brown obtained his master of public health degree in 1924. Upon leaving El Paso he established a medical practice in Marfa and served as city and county health officer for Marfa and Presidio County for six years. He was appointed state health officer in 1933, serving in that capacity until 1937. He was director of public health for the city of Houston from 1937 to 1942.

Dr. Brown served as a lieutenant in the Army Medical Corps for three years during World War I and was stationed in the Philippines and China. When World War II broke out, he entered the United States Public Health Service as a senior surgeon with the Coast Guard, holding the rank of lieutenant colonel.

While in the capacity of state health officer, Dr. Brown was instrumental in getting Texas admitted into the registration area. Through his efforts, scholarships were secured from the federal government to enable young people to study public health. Too, he created the dental division in the State Health Department.

DR. JOHN W. BROWN

Dr. Brown had been a member of the American Medical Association and the Texas Medical Association through several counties medical societies, including the El Paso and Harris Counties Medical Societies. He was also a member of the American Public Health Association and a life member of the Commissioned Officers Association of the United States Public Health Service. Dr. Brown enjoyed hunting as a sport and had collected several prize animal trophies. He was a Mason and a member of the Methodist Church.

On June 4, 1913, in El Paso, Dr. Brown married the former Miss Katherine L. Adams, who survives him, as do two sons, John William Brown, Jr., Bogota, Colombia; and the Rev. Alanson Brown, Guadalajara, Mexico; one daughter, Mrs. Frank R. Summers, Houston; two brothers, Dr. R. L. Brown and S. T. Brown, both of Pearsall; three sisters, Mrs. W. C. Griggs and Miss Margaret Brown, Orange, and Miss Mary Brown, Holbrook, Ariz.; and eight grandchildren.